ORDER NO. MD9603007C1
A6

Service Manual

COMPACT disc DIGITAL AUDIO

MASH* multi-stage noise shaping

CD Stereo System

SA-CH34

Remote Control Transmitter SB-CH34 SA-CH34 SB-CH34

Colour

(K) ... Black Type

Area

Suffix for Model No.	Area	Colour
(P)	U.S.A.	(K)
(PC)	Canada	

* MASH is a trademark of NTT.

System	Music Center	Speaker
SC-CH34 (P)	SA-CH34 (P)	SB-CH34 (P)
SC-CH34 (PC)	SA-CH34 (PC)	

TAPE SECTION : SG20W MECHANISM SERIES
CD SECTION : RAE0150Z TRAVERSE DECK SERIES

■ Specifications

■ Amplifier Section

Rated minimum sine wave FTC power output
90 Hz – 20 kHz both channels driven
1% total harmonic distortion 2 x 20 W (4 Ω)
1 kHz continuous power output, both channels driven
1% total harmonic distortion (DIN POWER) 2 x 22 W (4 Ω)
Total harmonic distortion
Half power at 1 kHz 0.1 % (4 Ω)
Frequency response
CD 45 Hz - 20 kHz (–3 dB)
Input sensitivity
AUX 250 mV
Input impedance
AUX 47 kΩ
Load impedance 4 Ω

■ FM Tuner Section

Frequency range 87.9 – 107.9 MHz (200 kHz steps)
87.5 – 108.0 MHz (100 kHz steps)
Sensitivity 23.3 dBf (4.0μV, IHF '58)
Total harmonic distortion
MONO 0.3 %
STEREO 0.5 %
S/N (MONO) 65 dB
Frequency response 50 Hz – 15 kHz, (+0.5 dB, –2 dB)
Image rejection at 98.1 MHz 46 dB
Stereo separation at 1kHz 35 dB
Antenna terminal(s) 75 Ω (unbalanced)

■ AM Tuner Section

Frequency range 520 – 1710 kHz
Sensitivity
(for 500 mW) 280μ V/m
(S/N 20dB) 500μ V/m
Image rejection at 1000 kHz 40 dB

Notes :
1. Specifications are subject to change without notice. Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

■ Cassette Deck Section

Track system 4 track, 2 channel
Heads
Playback Solid permalloy head
Record/playback Solid permalloy head
Erasure Double gap ferrite head
Motor DC servo motor
Recording system AC bias 100 kHz
Erasing system AC erase 100 kHz
Tape speed 4.8 cm/sec ($1^{7}/_{8}$ ips)
Frequency response
NORMAL 30 Hz - 14 kHz (+2 dB, -5 dB)
S/N (NORMAL TYPE) 52 dB (A weighted)
Wow and flutter 0.1 % (WRMS)
Fast forward and rewind times
Approx. 110 seconds with C-60 cassette tape

■ CD Section

Sampling frequency 44.1 kHz
Decoding 16 bit linear
Beam source/wave length Semiconductor laser / 780 nm
No. of channels Stereo
S/N (CD UNIT OUT) 95 dB (JIS. A)
Wow and flutter Below measurable limit
Digital filter 8 fs
D/A converter MASH (1 bit DAC)

■ General

Power consumption 77 W
Power supply AC 120 V, 60 Hz
Dimensions (W x H x D) 270 x 320 x 322 mm
($10^{5}/_{8}$" x $12^{19}/_{32}$" x $12^{11}/_{16}$")
Weight 6.4 kg (14.1 lb.)

Panasonic®

© 1996 Matsushita Electronics (S) Pte. Ltd.
All rights reserved. Unauthorized copying and distribution is a violation of law.

Contents

⚠ WARNING

This service information is designed for experiense repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

■ Contents

	Page
SAFETY PRECAUTIONS	2
PRECAUTION OF LASER DIODE	2
HANDLING PRECAUTIONS FOR TRAVERSE DECK	2
BEFORE REPAIR AND ADJUSTMENT	3
PROTECTION CIRCUITRY	3
OPERATION CHECKS AND MAIN COMPONENT REPLACEMENT	3 ~ 8
SELF-DIAGNOSTIC DISPLAY FUNCTION	9 ~ 10
BEFORE MOVING OR SHIPPING THIS UNIT	10
CD TEST MODE FUNCTION	11
RELIABILITY TEST MODE FOR CD/CD CHANGER	12
MEASUREMENTS AND ADJUSTMENTS	13
TERMINAL FUNCTION OF ICs	14 ~ 16
TERMINAL GUIDE OF ICs TRANSISTORS AND DIODES	17
WIRING CONNECTION DIAGRAM	18 ~ 19
BLOCK DIAGRAM	20 ~ 23
PRINTED CIRCUIT BOARD	24 ~ 30
SCHEMATIC DIAGRAM	31 ~ 43
TROUBLESHOOTING GUIDE	44
MECHANISM PARTS LIST	45
MECHANISM PARTS LOCATION (RAA0910)	46 ~ 47
CD LOADING UNIT PARTS LIST	48
CD LOADING UNIT PARTS LOCATION	49
CABINET PARTS LOCATION	50 ~ 51
REPLACEMENT PARTS LIST	52 ~ 54
RESISTORS & CAPACITORS	55 ~ 58
PACKAGING	59

■ Safety Precautions (This "Safety Precaution" is applied only in U.S.A.)

1. Before servicing, unplug the power cord to prevent an electric shock .
2. When replacing parts, use only manufacturer's recommended components for safety .
3. Check the condition of the power cord .Replace if wear or damage is evident .
4. After servicing ,be sure to restore the lead dress, insulation barriers ,insulation papers ,shields ,etc .
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard .

• Insulation Resistance Test

1. Unplug the power cord and short the two prongs of the plug with a jumper wire .
2. Turn on the power switch .
3. Measure the resistance value with ohmmeter between the jumper AC plug and each exposed metal cabinet part ,such as screwheads, antenna ,control shafts ,handle brackets , etc . Equipment with antenna terminals should read between 3MΩ and 5.2MΩ to all exposed parts* .(Fig. 1) Equipment without antenna terminals should read approximately infinity to all exposed parts . (Fig. 2)
   *Note :Some exposed parts may be isolated from the chassis by design. These will read infinity .
4. If the measurement is outside the specified limits ,there is a possibility of a shock hazard .The equipment should be repaired and rechecked before it is returned to the customer .

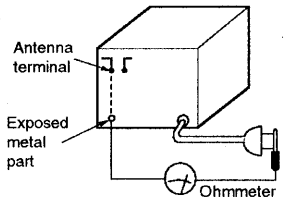


Fig. 1

Resistance = 3MΩ – 5.2MΩ

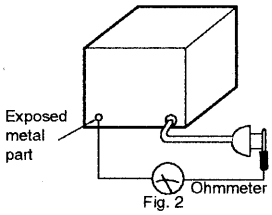


Fig. 2

Resistance = Approx ∞

■ Precaution of Laser Diode

CAUTION: This unit utilizes a class 1 laser. Invisible laser radiation is emitted from the optical pick up lens.
When the unit is turned on :

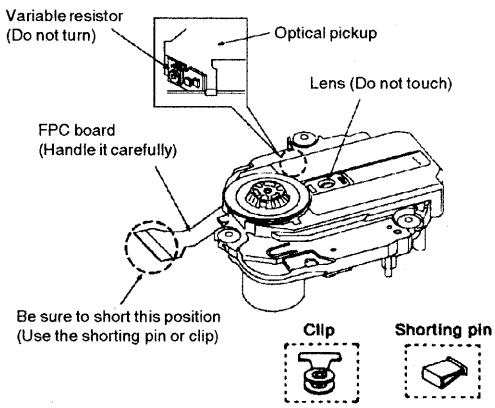
1. Do not look directly into the pick up lens.
2. Do not use optical insturments to look at the pick up lens.
3. Do not adjust the preset variable resistor on the pick up lens.
4. Do not disassemble the optical pick up unit.
5. If the optical pick up is replaced, use the manufacturer's specified replacement pick up only.
6. Use of control or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

■ Handling Precautions for Traverse Deck

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.
So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

- **Handling of traverse deck (optical pickup)**

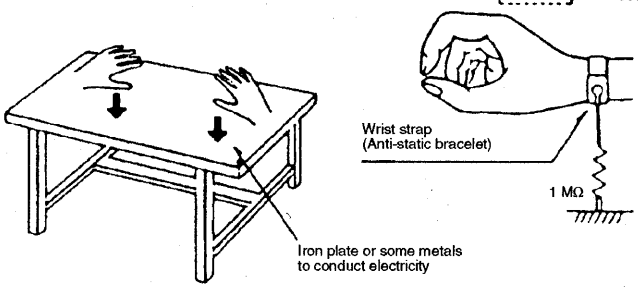
1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. To prevent the breakdown of the laser diode, an antistatic shorting pin is inserted into the flexible board (FPC board). When removing or connecting the short pin, finish the job in as short time as possible.
3. Take care not to apply excessive stress to the flexible board (FPC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.


Variable resistor (Do not turn)
Optical pickup
Lens (Do not touch)
FPC board (Handle it carefully)
Be sure to short this position (Use the shorting pin or clip)
Clip
Shorting pin

- **Grounding for electrostatic breakdown prevention**

1. Human body grounding
   Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding
   Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution :
The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).



■ Operation Checks and Main Component Replacement Procedures

1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
3. Select items from the following index when checks or replacement are required.
4. Refer the Parts No. on the page of "Main Component Replacement Procedures", if necessary.

• Contents

page

• Disassembly Procedures
1. Removal of the CD Changer Unit 3
2. Disassembly of the Traverse Unit 4
3. Disassembly of the CD Changer Unit ..... 4 & 5

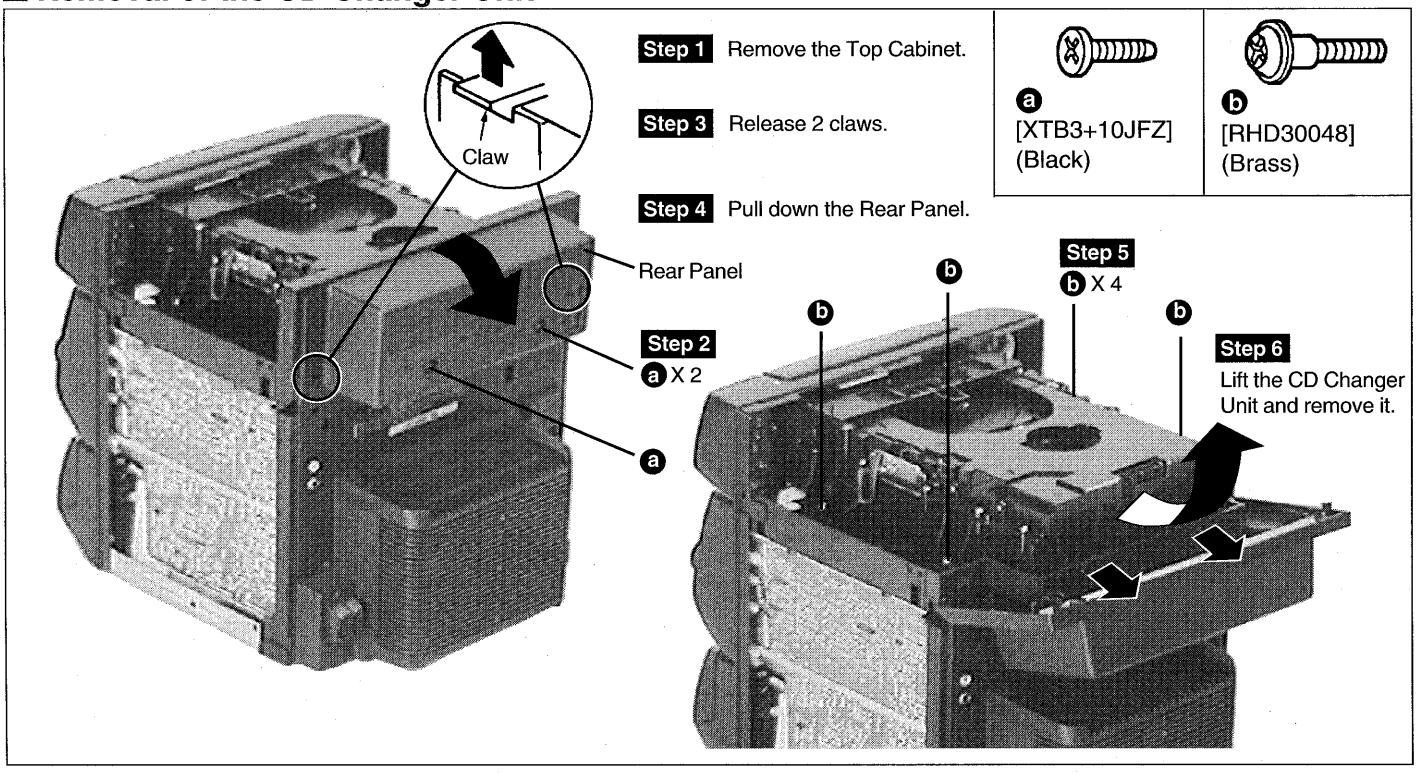
• Assembly of the CD Changer Unit ..... 5 & 6

• Checking Procedure for each major P.C.B.
1. Checking for the Servo P.C.B. 6
2. Checking for the Main, Tuner, Panel and Deck P.C.B. 7

• Main Component Replacement Procedures
1. Replacement of the Traverse Deck 7
2. Replacement of the Power Amplifier IC and Regulator Transistors 8

Warning : This product uses a laser diode. Refer to caution statements on page 2.

■ Removal of the CD Changer Unit



■ Before Repair and Adjustment

Disconnect AC power, discharge both Power Supply Capacitors (C522 and C523) through a 10Ω , 5W resistor to ground.
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.
After repairs are completed, restore power gradually using a variac, to avoid overcurrent.
Current consumption at 120V, 50 Hz in NO SIGNAL mode should be less than 350 mA.
Current consumption at 120V, 60 Hz in NO SIGNAL mode should be less than 260 mA.

■ Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:
- No sound is heard when the power is turned on.
- Sound stops during a performance.

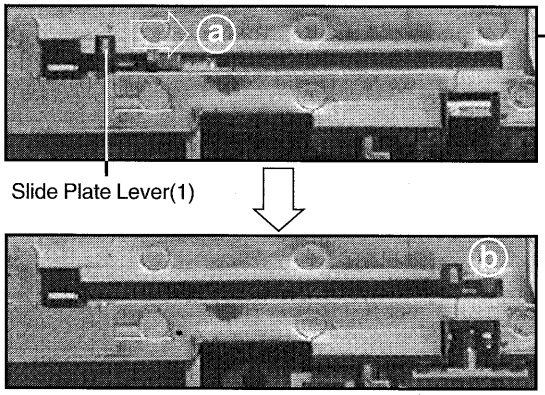
The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

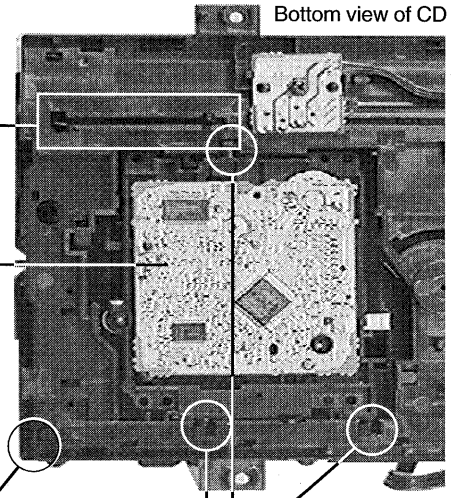
If this occurs, follow the procedure outlines below:
1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:
When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

■ Disassembly of the Traverse Unit

Step 1 Follow the procedures in 'Remove of the CD Changer Unit' (Step 1 ~ Step 6).





Step 2

Move the Slide Plate Lever(1) in the direction of arrow ⓐ to the position ⓑ and hold it, then lift up the stopper ⓒ until the Slide Plate Lever(2) eject out. Now the 3 slide plate will be open as shown in the figure 1 on the right and the traverse unit can be removed.

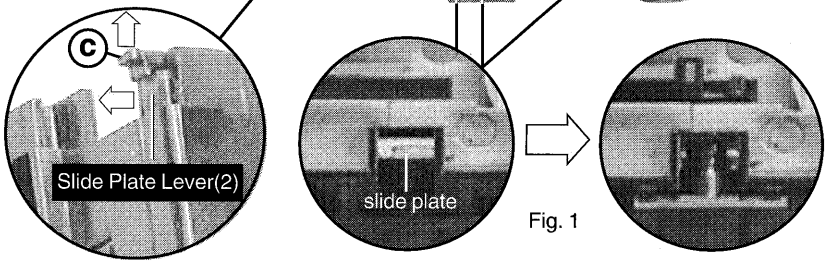
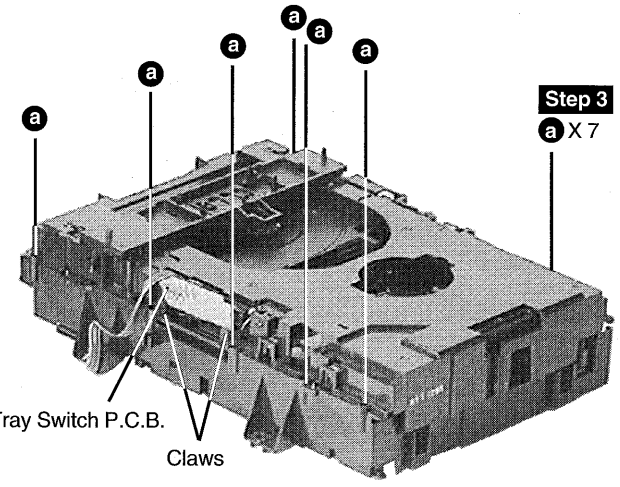


Fig. 1

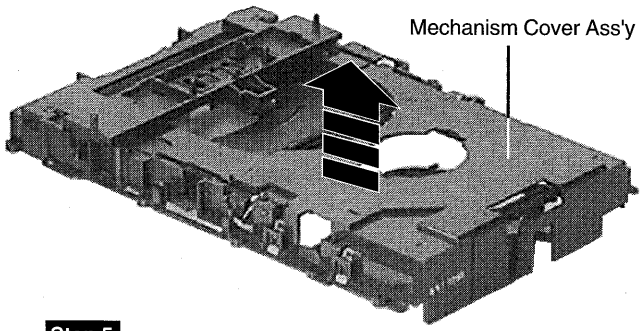
■ Disassembly of the CD Changer Unit

Step 1 Follow the procedures in 'Remove of the CD Changer Unit' (Step 1 ~ Step 6).



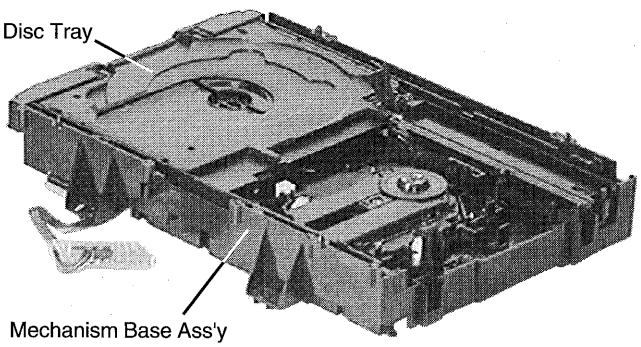
Step 2 Remove the Tray Switch P.C.B.

Step 4 Remove the Mechanism Cover Ass'y.



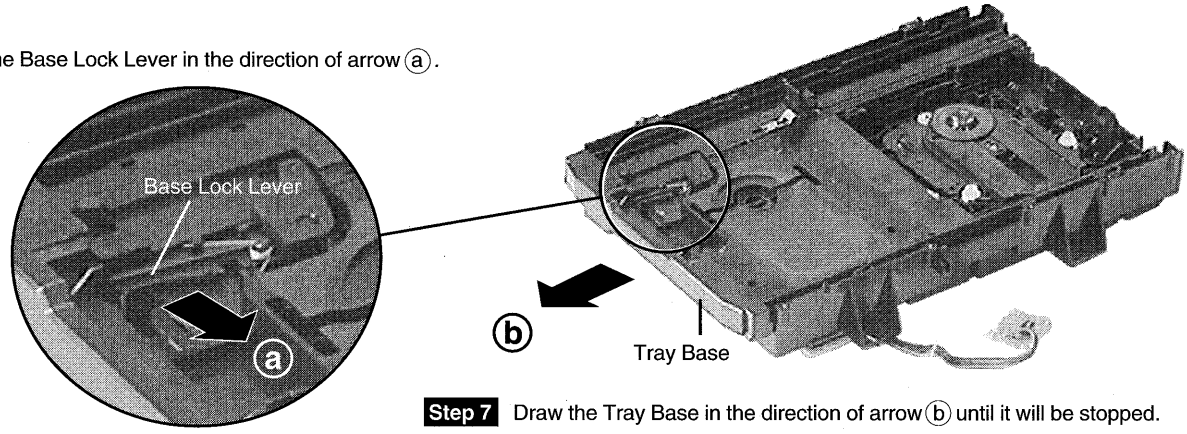
Step 5

Remove the Disc Tray sided on the Mechanism Base Ass'y.



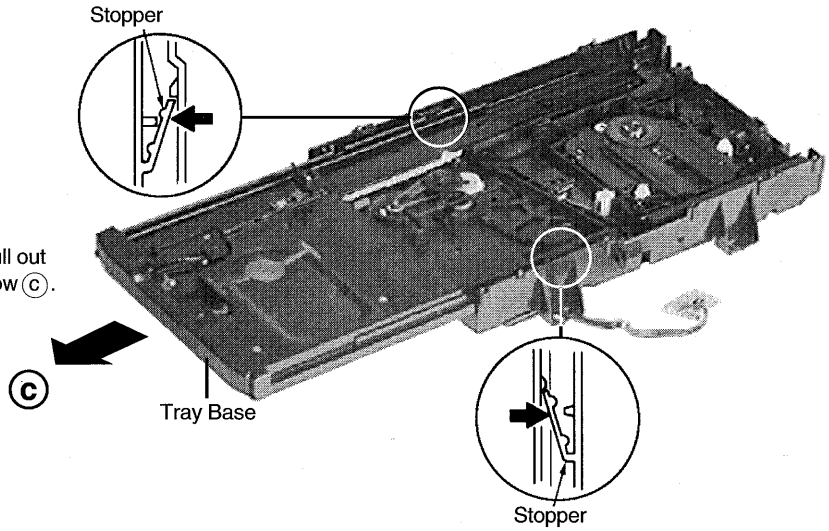
ⓐ
[XTB3+10JFZ]
(Black)

Step 6
Unlock the Base Lock Lever in the direction of arrow ⓐ.



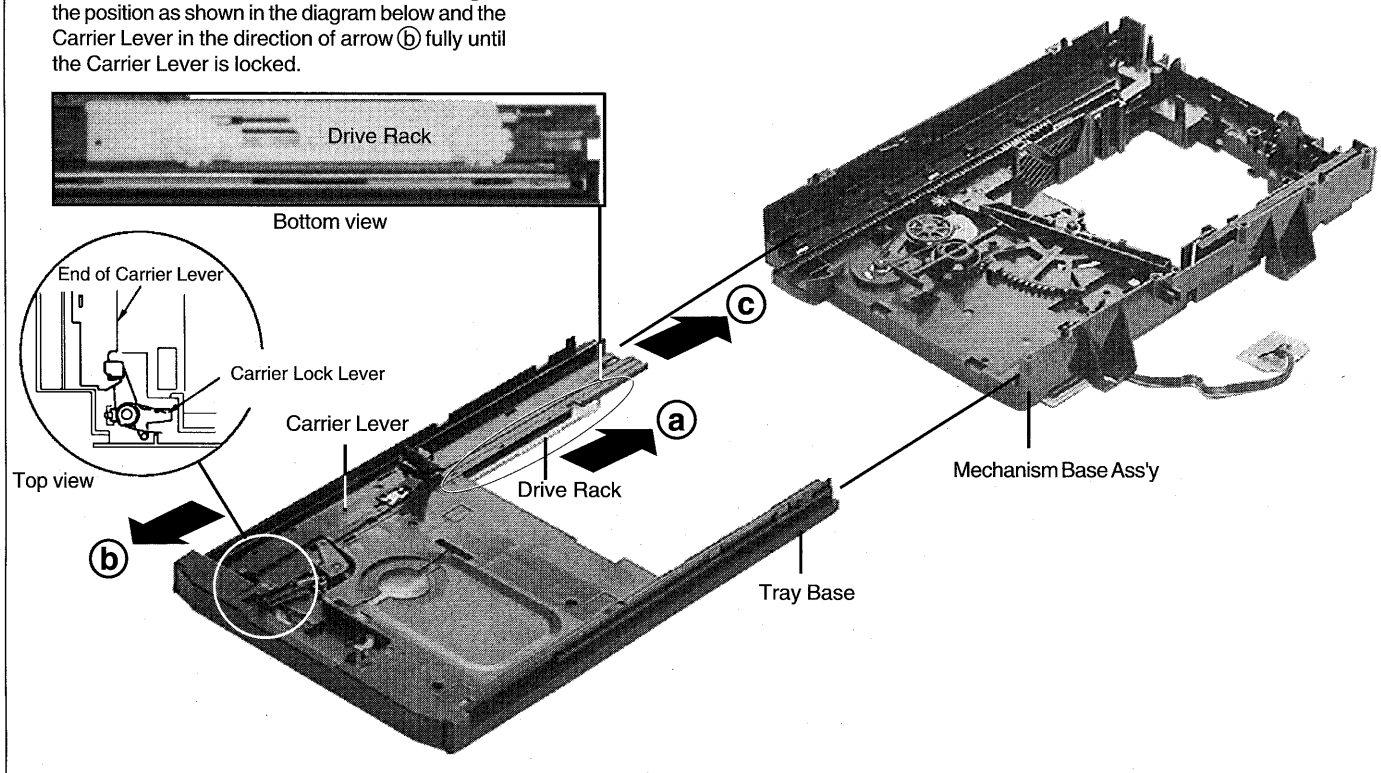
Step 7 Draw the Tray Base in the direction of arrow ⓑ until it will be stopped.

Step 8
Release 2 stoppers manually and pull out the Tray Base in the direction of arrow ⓒ.



■ Assembly of the CD Changer Unit

Step 1
Move the Drive Rack in the direction of arrow ⓐ to the position as shown in the diagram below and the Carrier Lever in the direction of arrow ⓑ fully until the Carrier Lever is locked.



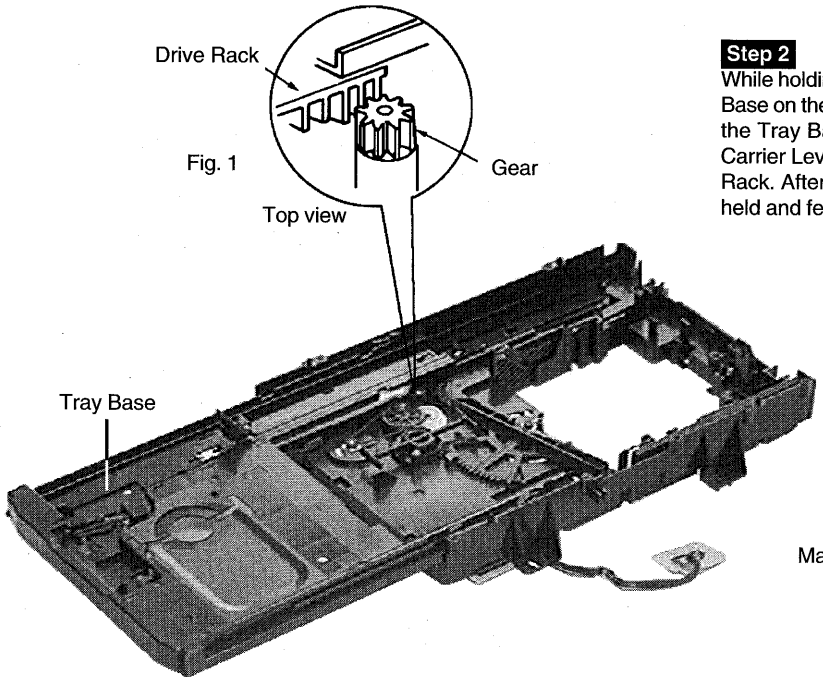


Fig. 1

Step 2
While holding the Drive Rack and Carrier Lever, insert the Tray Base on the Mechanism Base in the direction of arrow ⓒ until the Tray Base stops as shown in figure 1. Release only the Carrier Lever and push the Tray Base together with the Drive Rack. After engaging the gear, release the Drive Rack which held and feed the Tray Base slowly.

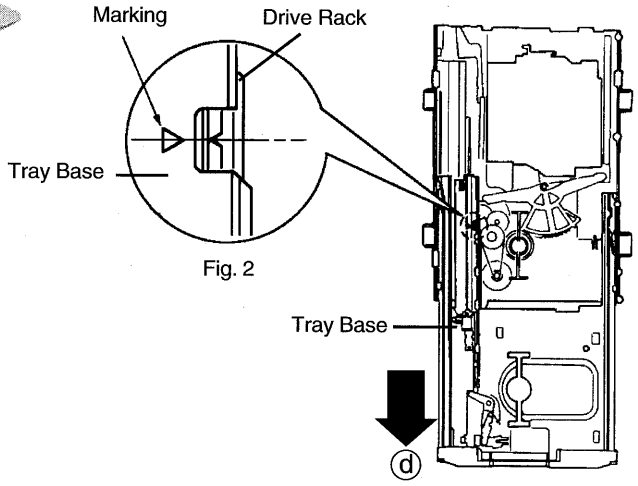


Fig. 2

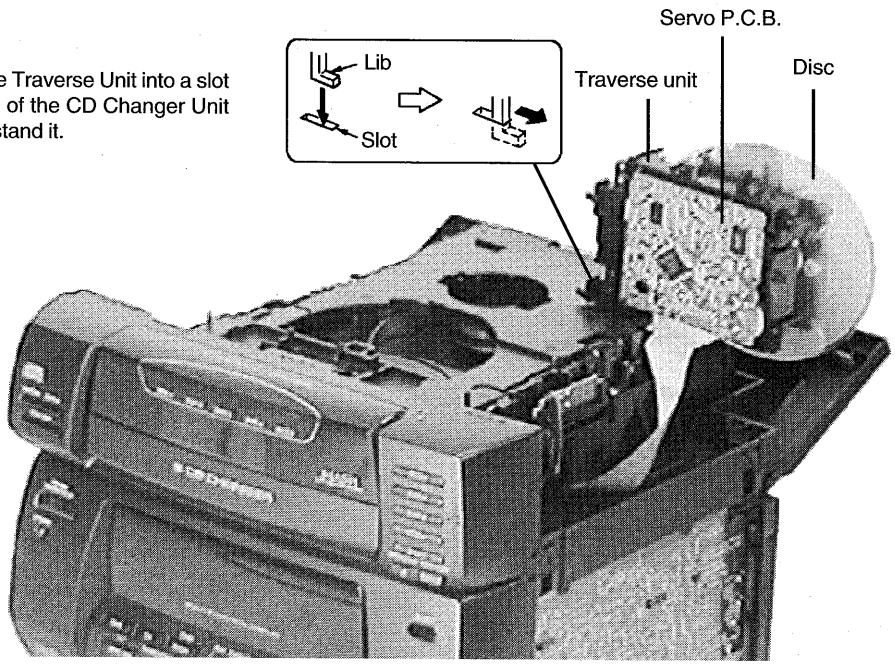
Step 3
Draw the Tray Base in the direction of arrow ⓓ to the end until it stops. Make sure the mark '▽' on the Tray Base is aligned with the mark '△'on the Drive Rack as shown in figure 2 before closing the Tray Base. (In case that the statement above is not operated, draw the Tray Base again from step 2)

■ Checking Procedure for each major P.C.B.

1. Checking of the Servo P.C.B.

Step 1 Follow the procedures in 'Disassembly of the Traverse Unit' (**Step 1** ~ **Step 2**).

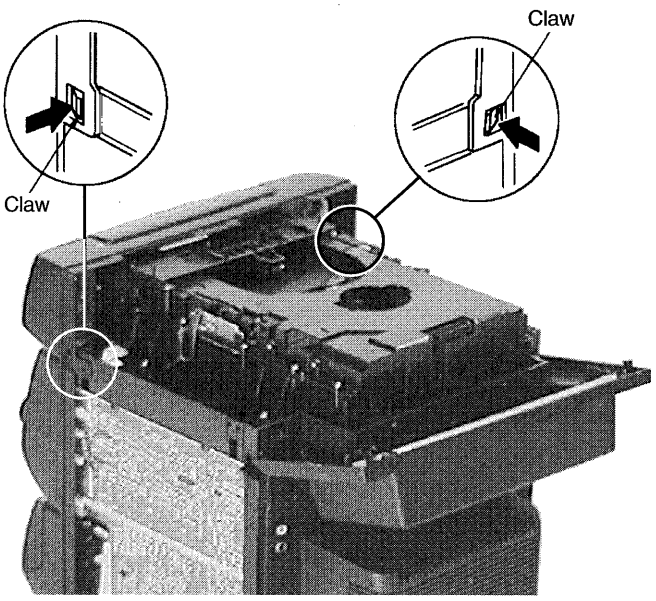
Step 2
Slide in the Traverse Unit into a slot on the top of the CD Changer Unit and then stand it.



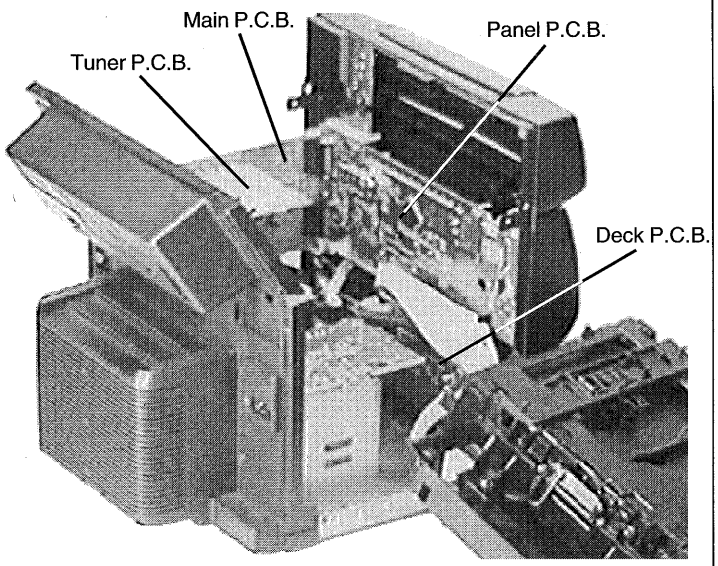
Step 3
Attach the disc and clamper with magnet to the Traverse Unit as shown in the diagram on the left, then check the Servo P.C.B.
(Refer to page 11 of how to check the CD Unit without connecting to the CD Changer Loading Mechanism.)

2. Checking of the Main, Tuner, Panel and Deck P.C.B.

Step 1 Follow the procedures in 'Removal of the CD Changer Unit' (Step 1 ~ Step 4).



Step 2
Remove the CD Changer Chassis and CD Changer Unit with releasing the claws. (Put the CD Changer Chassis and Unit to the left side of the set)

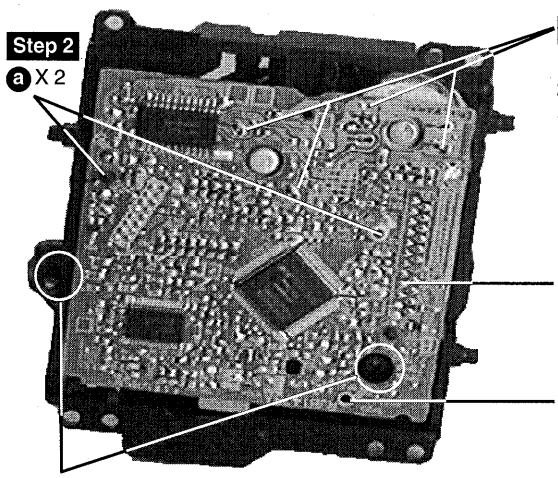


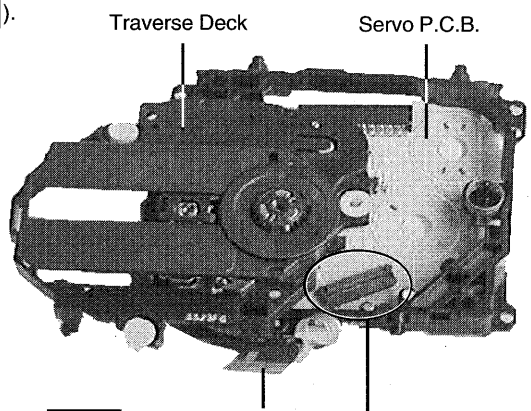
Step 3
Check the Main, Tuner, Panel and Deck P.C.B.

■ Main Component Replacement Procedures

1. Replacement of the Traverse Deck

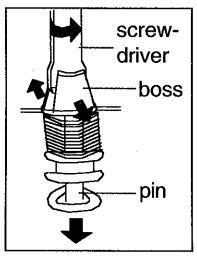
Step 1 Follow the procedures in 'Disassembly of the Traverse Unit' (Step 1 ~ Step 2).



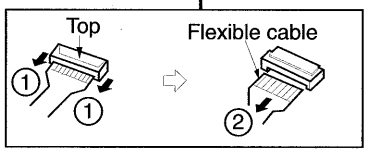


Step 6 Remove the flexible cable CN701.

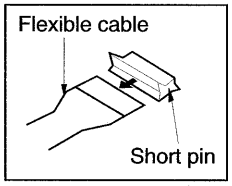
Step 5 Widen the 2 bosses with a flat screwdriver and pull out the 2 pins. Then remove the Traverse Deck.



• Removal of the flexible cable
Push the top of the connector in the direction of the arrow ①, and then pull out the flexible cable in the direction of the arrow ②.



Note :
Insert a short pin into the flexible cable for traverse unit.

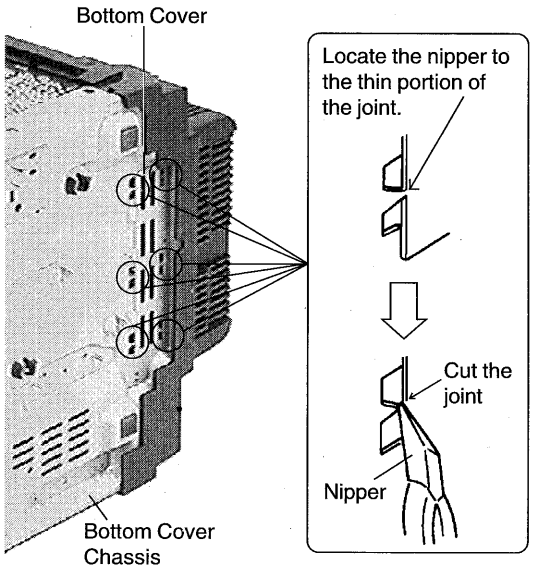


a [XTV2+6G] (Brass)

b [XTN2+6G] (Brass)

2. Replacement of the Power Amplifier IC and Regulator Transistors.

Step 1 Follow the procedures in 'Checking of the Main, Tuner, Panel and Deck P.C.B.' and remove the Front Panel.

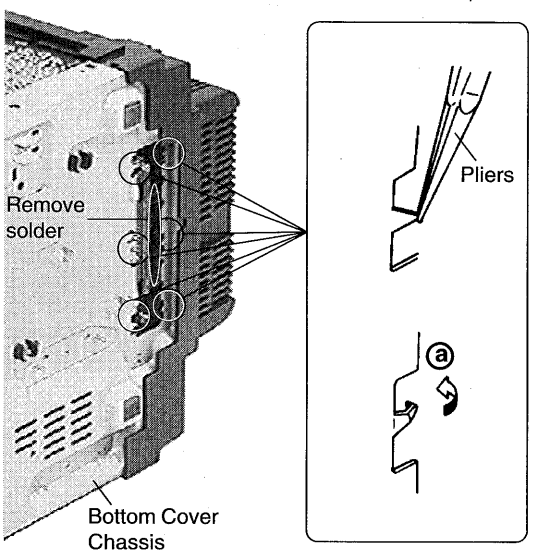


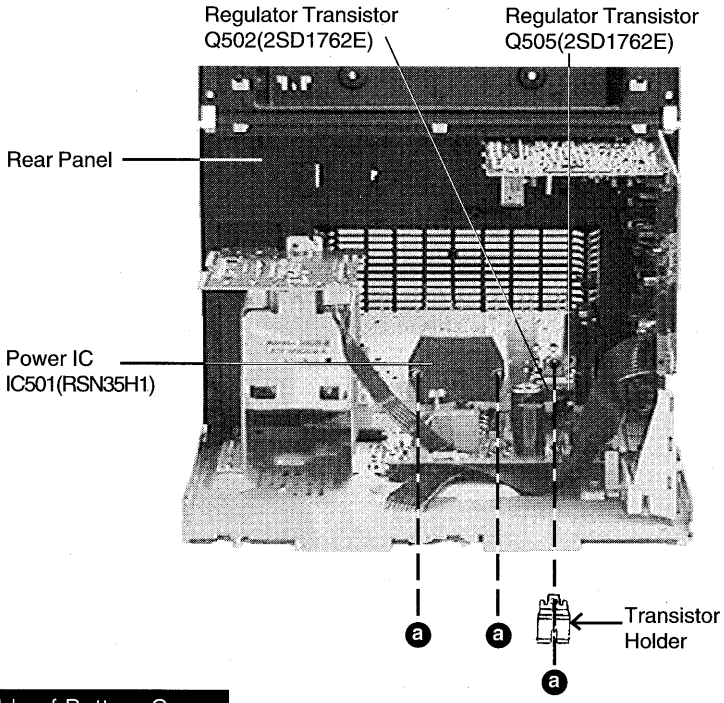
Step 2
Cut the joints (6 portion) between bottom cover and bottom cover chassis ass'y with a nipper.

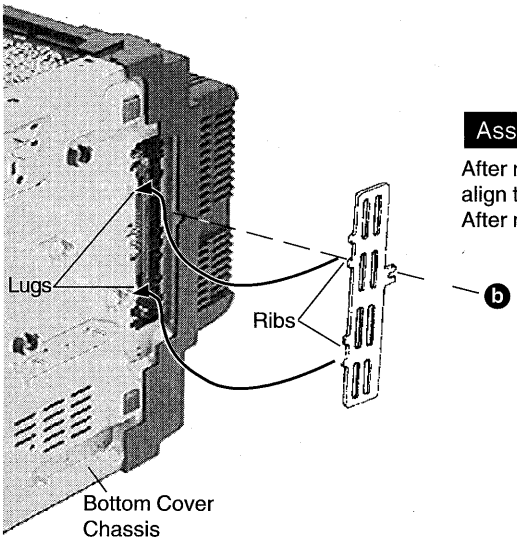
Step 3
After cutting the joints (6 portions), bend the portions of the bottom chassis ass'y in the direction of arrow ⓐ with pliers. (Step 2 must be performed to avoid injury by sharp edge.)

Step 4
Unsolder the terminals of Power IC or Regulator Transistors on the solder surface.

Step 5
Remove 3 screws fixed to the Power IC and Transistor Holder, then remove Power IC, Transistor Holder and Regulator Transistors.

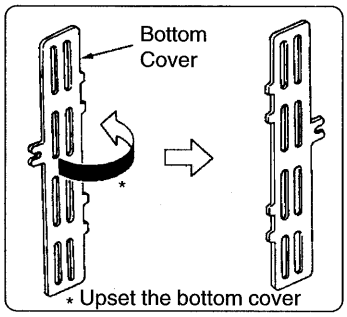






Assembly of Bottom Cover

After replacing the Power IC or Regulator Transistor, upset the bottom cover and align the ribs of bottom cover to the lugs on the bottom chassis ass'y.
After mounting the bottom cover on the bottom chassis ass'y, fix it with a screw.



ⓐ [XTW3+15T]

ⓑ [XTB3+8J]

■ Self-Diagnostic Display Function

■ Self-diagnostic display

This unit is equipped with a self-diagnosis display function which, if a problem occurs, will display an error code corresponding to the problem. Use this function when performing maintenance on the unit.

■ How to enter the Self-Diagnostic Function

POWER STANDBY⏻/ON — Turn the unit on with no cassette in the deck. (SELECTOR : TAPE)

↓

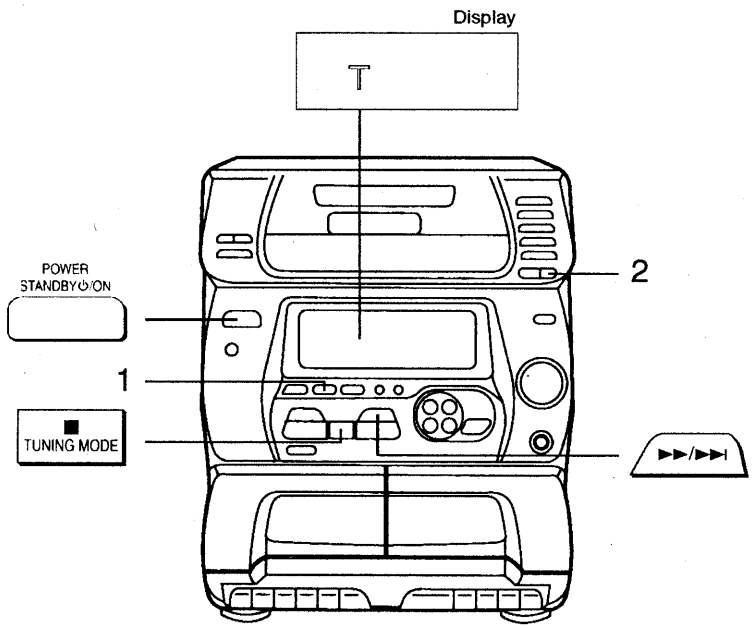
■ TUNING MODE — Press and hold the "■ TUNING MODE" button for at least 2 seconds.

↓

■ TUNING MODE, ▶▶/▶▶| — While pressing the "■ TUNING MODE" button, press "▶▶/▶▶|" button for at least 2 seconds.

↓

Display: T — "T" will appear on the FL display. (unit is in the Self-Diagnostic Function.)



■ CD / CD Changer Self-Diagnostic function mode

Press following buttons while the unit is in the Self-Diagnostic function mode

1. Press CD
2. Press CHECK

Error condition is detected during "NEXT CHECK" operation and memorised.

■ To Display Self-Diagnostic Result

1. Press"■ TUNING MODE" button.
   *If several problem exist, error code will change each time when "■ TUNING MODE" button is pressed.
   (e.g. F15 →F16 → F28 ..... etc.)
   *If no problem, "T" will remain unchanged.

■ To clear all Error code

1. Press "■ TUNING MODE" button for 5 seconds.
2. FL indicator shows "CLEAR" for 1 second and change to "T".

■ How to get out from Self-Diagnostic function

1. Press "POWER" button OFF.

(1) Error detection for CD/CHANGER block

No.	Error	Error Display	Problem condition
1	REST SW detection error	F15	CD does not function. This error occurs when the Optical Pick Up REST SW (S701) is not detected within the specified time (about 8 seconds)
2	S1 (STK), S2 (PLY) detection error	F28	CD loading mechanism does not move correctly. This error occurs when S1 (stocker position detection) is not ON or OFF, or S2 (play position detection) is not ON or OFF within the specified time.
3	S3 (TUP) detection error	F16	CD does not function. This error occurs when S3 (Traverse up detection) is not ON or OFF within the specified time.
4	S4 (DRO) detection error	F25	Tray does not stay open. This error occurs when S4 (Tray open detection) is not ON or OFF during OPEN/CLOSE operation within the specified time.
5	S5 (TNO) detection error	F27	Tray number does not detect correctly. This error occurs when S5 (Tray number detection) can not be detected normally or when the TRAY No. is uncertain.
6	Transmission error between CD servo LSI and micon	F26	CD does not function. This error occurs when the POWER is ON for the CD block and an error is detected after the transmission has started.
7	CD power error	F75	CD does not function. Check if CDRST is H for SELECTOR at CD. If it is not H after 1 second, it shall be memorised as an error.

(2) Power Supply related error detection

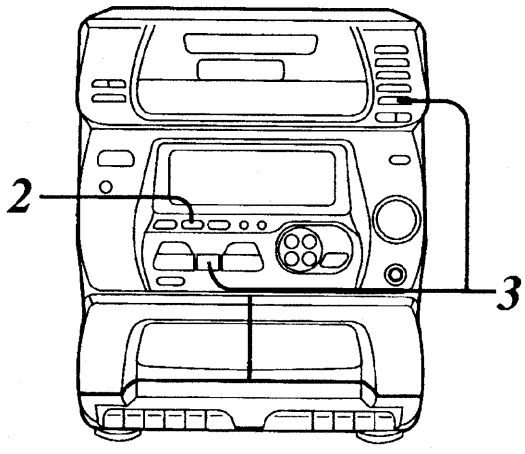
No.	Error	Error Display	Problem condition
1	POWER AMP output abnormal	F61	When POWER SW is on, power become off automatically. During normal operation, if DC DET become L, PCNT shall become L and the error display on the left shall be displayed.

■ Before Moving or Shipping This Unit

Before moving or shipping this CD changer:
Prepare the CD changer as described below to prevent damage to the mechanism.

1. Remove all CDs.
2. Select "CD" with input selector.
3. Hold down stop button (■) for 2 seconds and then without releasing it, hold down both it and DISC 5 for 2 more seconds.
   (This will turn OFF the power and set the so-called "shipping mode".)
4. Unplug AC power supply cord.

Avoid strong vibrations or impact while moving the equipment. The shipping mode will turn OFF automatically when you turn the power ON the next time.



■ CD Test Mode Function

This CD test mode is provided to check CD unit without connecting to changer loading mechanism. This mode shall operates CD PLAY with CD unit being connected only and CD Automatic Alignment result is shown on FL display.

■ How to set CD test mode

Prepare and set up the CD unit
checking condition (Refer to page 6)

CD Press CD

■ TUNING MODE Press and hold the "■ TUNING MODE" button at least 2 seconds.

■ TUNING MODE + ▶▶/▶▶| While pressing the "■ TUNING MODE" button, press "▶▶/▶▶|" button for at least 2 seconds.

Display: CD E00 Automatic Alignment result appear on the FL display.

■ CD Automatic Alignment result indication

This function provided indication of error code as the result of Automatic Alignment of CD (Tracking, Focus, Offset, etc.). Based on these error codes, the faulty area can be located.

■ Error code Explanation

- The unit is satisfactory if the error code is E00
- Before testing, make sure that the test disc is free of scratches, dirt and that the optical pick up lens is clean.

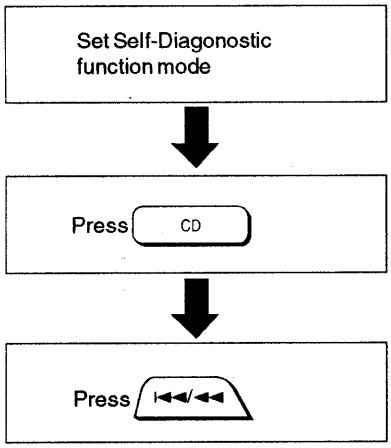
Error code	E00	E01	E02	E03	E04	E05	E06	E07	E08	E09	E0A	E0B	E0C	E0D	E0E	E0F
Focus offset	O	※	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Tracking offset	O	※	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Focus Gain (Rough)	O	※	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Tracking Gain(Rough)	O	–	O	X	O	X	O	X	O	X	O	X	O	X	O	X
Tracking balance	O	–	X	X	O	O	X	X	O	O	X	X	O	O	X	X
Focus balance	O	–	O	O	X	X	X	X	O	O	O	O	X	X	X	X
Tracking or Focus Gain (Fine)	O	–	O	O	O	O	O	O	X	X	X	X	X	X	X	X

O Satisfy X Fault (※ Fault either items)

■ Reliability test mode for CD / CD CHANGER

This function provided to check CD player and CD CHANGER mechanism. Use this function to check CD player and loading mechanism operation after repair or to find intermittent problem.

■ How to set reliability test mode.



■ Operation and function

In the reliability test mode, the set repeat the following operation:

1) Open tray 1;
2) Fully OPEN condition, CLOSE 1 sec after drawer stops;
3) PLAY the first track of disc 1 for 2 sec;
4) Skip to the last track, play for 2 sec and stop;
5) Open tray 3;
6) Fully OPEN condition, CLOSE 1 sec after drawer stops;
7) PLAY the first track of the disc 3 for 2 sec;
8) Return to above step 1) after 1 sec.

- During this series of operation, the number of its operation shall be shown in the alphanumeric display repeatedly.

It shall start from

- It shall move up one counter when step 1- 8 of the above operations end.

It shall display after has been reached.

- Execute POWER OFF to cancel the reliability test mode and the self-diagnostic mode.

■ Measurements and Adjustments

< CASSETTE DECK SECTION >

■ HEAD AZIMUTH ALIGNMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	REMARKS
QZZCFM (8kHz, -20dB)	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 1 and then connect the lead wires of the plug to the measuring instrument.)	Azimuth screw (Shown in Fig. 2 & 3)	1. Playback the azimuth adjustment portion (8 kHz, -20 dB) of the test tape (QZZCFM) . Vary the azimuth adjusting screw until the outputs of the L-ch and R-ch are maximized and the lisajous waveform, as illustrated, approaches 0 degrees. Notes: When the adjusting positions are different with L-ch and R-ch, find a position where the outputs of L-ch and R-ch are balanced, and then make the adjustment into the range " 0 ~ – 0.5 dB" from the peak.

■ TAPE SPEED ADJUSTMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	REMARKS
QZZCWAT (3 kHz)	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 1 and then connect the lead wires of the plug to the measuring instrument.)	VR601 (Shown in Fig. 4)	**Normal Speed Adjustment** 1. Insert a test tape (QZZCWAT) in Deck 2 and play it back. 2. Adjust **VR601** until the measured value becomes **3005 ± 50 Hz.**
	3. Check Deck 1 in the same way to make sure it satisfies the specification. Deck 1's tape speed must be Deck 2' tape speed ±30 Hz. If it doesn't ,repeat step 1 and 2 above. Note: This set uses one drive motor, so be sure to perform the adjustment in Deck 2. **High Speed Measurement** 4. Insert the playback tape into Deck 2 and the editing tape into Deck 1. 5. Press the Tape Edit Speed Button to display the "EDIT-HI". 6. Press the Deck 1 Pause button, then press the Record Button. 7. Press the Deck 2 Playback Button. * Editing is started by means of the Synchro-Start function. 8. Check to ensure that the measured speed is 5100 Hz or above.		

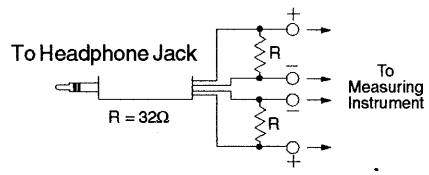


Fig. 1

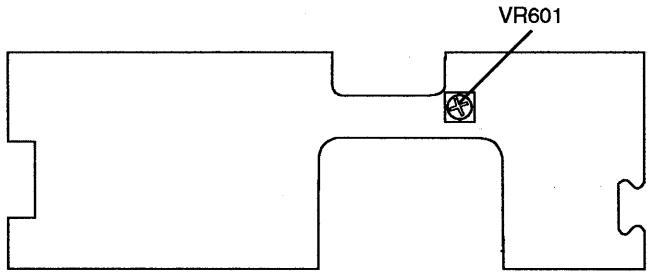


Fig. 4

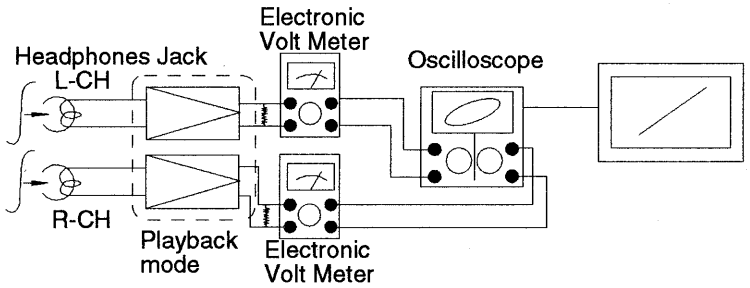


Fig. 3

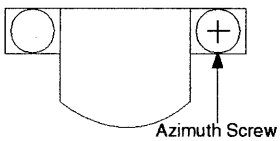


Fig. 2

■ Terminal Function of ICs

• IC701 (AN8835SBE1) Servo Amplifier

Pin No.	Mark	I/O	Function
1	PDA	I	PD signal input
2	PDB	I	PD signal input
3	VCC	I	Power supply connection
4	LPD	I	Laser PD connection
5	LD	O	Power out for LD driving
6	RF	O	RF signal output
7	RFIN	I	RF signal input
8	CAGC	I	AGC loop filter connection
9	ARF	O	RF-AGC output
10	CSBRT	I	Capacitor for detection connection
11	CEA	I	Capacitor connection for HPF amplifier
12	BDO	O	BDO output ("H" : drop out)
13	LDON	I	LD APC input ("H" : ON, "L" : OFF)
14	GND	—	Ground connection

Pin No.	Mark	I/O	Function
15	/RFDET	O	NRFDET output ("L" : detection)
16	CROSS	O	CROSS output (Track cross signal output)
17	OFTR	O	Off-track output("L" : ON track, "H" : OFF track)
18	VDET	O	VDET output("H" : Vibration detected)
19	ENV	O	RF envelope detection
20	TEBPF	I	Vibration detection signal input
21	CCRS	I	Capacitor for LPF connection
22	TE	O	Tracking error signal output
23	FE	O	Focus error signal output
24	TBAL	I	Tracking balance signal input
25	FBAL	I	Focus balance signal input
26	VREF	O	Reference voltage output
27	PDE	I	PD signal input
28	PDF	I	PD signal input

• IC703 (AN8389SE1) Focus coil / Tracking coil / Traverse motor / Spindle motor driver

Pin No.	Mark	I/O	Function
1	VCC	I	Power supply terminal
2	VREF	I	Reference voltage input
3	IN4	I	Motor driver (4) input
4	IN3	I	Motor driver (3) input
5	GND	—	Ground connection
6	NC	—	Ground connection
7	NRESET	I	Reset input
8	GND	—	Ground connection
9	IN2	I	Motor driver (2) input
10	PC2	I	PC2 (power cut) input
11	IN1	I	Motor driver (1) input
12	PC1	I	PC1 (power cut) input (Not used, open)

Pin No.	Mark	I/O	Function
13	PVCC1	I	Power supply (1) for driver
14	PGND1	—	Ground connection (1) for driver
15	D1–	O	Motor driver (1) reverse-action output
16	D1+	O	Motor driver (1) forward-action output
17	D2–	O	Motor driver (2) reverse-action output
18	D2+	O	Motor driver (2) forward-action output
19	D3–	O	Motor driver (3) reverse-action output
20	D3+	O	Motor driver (3) forward-action output
21	D4–	O	Motor driver (4) reverse-action output
22	D4+	O	Motor driver (4) forward-action output
23	PGND2	—	Ground connection (2) for driver
24	PVCC2	I	Power supply (2) for driver

• IC702 (MN662741RPA) Servo processor / Digital signal processor / Digital filter / D/A converter

Pin No.	Mark	I/O	Function
1	BCLK	O	Serial bit clock terminal (Not used, open)
2	LRCK	O	L/R discriminating signal (Not used, open)
3	SRDATA	O	Serial data (Not used, open)
4	DVDD1	I	Power supply (digital circuit) terminal
5	DVSS1	—	GND (digital circuit) terminal
6	TX	O	Digital audio interface signal
7	MCLK	I	Microprocessor command clock signal
8	MDATA	I	Microprocessor command data signal
9	MLD	I	Microprocessor command load signal
10	SENSE	O	Sense signal output
			(OFT,FESL,MAGEND,NAJEND,POSAD,SFG)
11	/FLOCK	O	Optical servo condition(focus)("L" : lead-in)
12	/TLOCK	O	Optical servo condition(tracking)("L" : lead-in)
13	BLKCK	O	Sub-code block clock (f=75Hz)
14	SQCK	I	External clock signal input for sub-code Q
			register.
15	SUBQ	O	Sub-code Q code output
16	DMUTE	I	Muting input ("H" : mute)
17	STAT	O	Status signal output
			(CRC,CUE,CLVS,TTSTVP,FCLV,SQCK)
18	/RST	I	Reset input
19	SMCK	O	1/2-divided clock signal of crystal oscillating at
			MSEL = "H" (fSMCK=8.4672MHz)
			1/4-divided clock signal of crystal oscillating at
			MSEL="L" (fSMCK=4.2336MHz)
20	PMCK	O	1/192-divided clock signal of crystal oscillating
			(fPMCK=88.2kHz) (Not used, open)
21	TRV	O	Traverse servo control output
22	TVD	O	Traverse drive signal output
23	PC	O	Spindle motor ON signal output ("L" : ON)
24	ECM	O	Spindle motor drive signal output
			(forced mode output)
25	ECS	O	Spindle motor drive signal output
			(servo error signal output)
26	KICK	O	Kick pulse output
27	TRD	O	Tracking drive output
28	FOD	O	Focus drive output
29	VREF	I	D/A (drive) output (TVD,ECS,TRD,FOD,
			FBAL,TBAL) Reference voltage input.
30	FBAL	O	Focus balance adjustment output
			(Not used,open)
31	TBAL	O	Tracking balance adjustment output
32	FE	I	Focus error signal input (analog input)
33	TE	I	Tracking error signal input (analog input)
34	RFENV	I	RF envelope signal input
35	VDET	I	Vibration detection signal input ("H" : detection)

Pin No.	Mark	I/O	Function
36	OFT	I	Off-track signal input ("H" : off track)
37	TRCRS	I	Track cross signal input
38	/RFDET	I	RF detection signal input ("L" : detection)
39	BDO	I	Dropout signal input ("H" : Dropout)
40	LDON	O	Laser on signal output ("H" : ON)
41	TES	O	Tracking error shunt signal output ("H" : shunt)
42	PLAY	O	Play signal out ("H" : PLAY)
43	WVEL	O	Double speed status signal output ("H" : DS)
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	I	DSL bias (Not used, open)
47	DSLF	I/O	DSL loop filter
48	PLLF	I/O	PLL loop filter
49	VCOF	I/O	VCO loop filter (Not used, open)
50	AVDD2	I	Power supply input (for analog circuit)
51	AVSS2	—	GND (for analog circuit)
52	EFM	O	EFM signal output (Not used, open)
53	PCK	O	PLL extraction clock ouput (Not used, open)
			(fPCK=4.321 MHz during normal playback)
54	PDO	O	Phase comparison signal of EFM and PCK signals
			(Not used, open)
55	SUBC	O	Sub-code serial data output (Not used, open)
56	SBCK	I	Sub-code frame clock signal output
			(fCLDCK=7.35kHz during normal playback)
57	VSS	—	GND
58	X1	I	Crystal oscillating circuit input (f=16.9344MHz)
59	X2	O	Crystal oscillating circuit output (f=16.9344MHz)
60	VDD	I	Power supply input (for oscillating circuit)
61	BYTCK	O	Byte clock output (Not used, open)
62	/CLDCK	O	Clock input for sub-code serial data
			(Not used, open)
63	FCLK	O	Crystal frame clock signal output
			(fCLK=7.35kHz, double=14.7kHz)
64	PFLAG	O	Interpolation flag output ("H" : interpolation)
			(Not used, open)
65	FLAG	O	Flag output (Not used, open)
66	CLVS	O	Spindle servo phase synchronizing signal output
			("H" : CLV, "L" : rough servo) (Not used, open)
67	CRC	O	Sub-code CRC checked output
			("H" : OK, "L" : NG) (Not used, open)
68	DEMPH	O	De-emphasis ON signal output
			("H" : ON) (Not used, open)
69	RESY	O	Frame resynchronizing signal output
			(Not used, open)
70	/RST2	I	Reset input through MASH circuit ("L" : Reset)
71	/TEST	I	Test input

Pin No.	Mark	I/O	Function
72	AVDD1	I	Power supply input (for analog circuit)
73	OUTL	O	Left channel audio signal output
74	AVSS1	—	GND
75	OUTR	O	Right channel audio signal output
76	RSEL	I	RF signal polarity assignment input
			(at "H" level, RSEL="H", at "L" level, RESL="L")
77	CSEL	I	Crystal oscillating frequency designation input

Pin No.	Mark	I/O	Function
			"L" : 16.9344MHz "H" : 33.8688MHz
78	PSEL	I	Test input (normally "L") (Not used, open)
79	MSEL	I	Output mode switching of SUBQ terminal
			("H" : Q code buffer mode)
80	SSEL	I	Output frequency switching for SMCK terminal
			"H" : SMCK=8.4672MHz
			"L" : MCK=4.2336MHz (Not used, open)

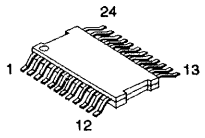
• IC901 (M38197MA133) System Microprocessor

Pin No.	Mark	I/O	Function
1	DECK 2	I	Mecha condition input(PLAY, FF/RW, MOTOR)
2	DECK 1	I	Mecha condition input(PLAY, FF/RW, MOTOR)
3	REC	I	Rec input
4	CRT	I	CRT timer
5	KEY 4	I	Key 4 input
6	KEY 3	I	Key 3 input
7	KEY 2	I	Key 2 input
8	KEY 1	I	Key 1 input
9	COM_CLK	O	Clock output for I/O exp. & sound processor
10	REG 6	I	Volume mode or volume curve select
11	SP_DATA	O	Data output for sound processor
12	SP_LATCH	O	LATCH output for sound processor
13	IO_DATA	O	Data output for I/O expander(BU2090)
14	CH_FWD	O	CD changer motor forward
15	CH_REV	O	CD changer motor reverse
16	CHG_SW1	I	CD changer SW input (STK_SW, TUP_SW)
17	CHG_SW2	I	CD changer SW input
			(DR0_SW, PLY_SW, TN0_SW)
18	CDRST	O	CD reset output
19	STATUS	I	CD signal processor status input
20	SQCK	O	CD subcode clock output
21	REG 7	O	CD acceleration time select
22	SUBQ	I	CD subcode data input
23	TLOCK	I	CD tracking lock input
24	FLOCK	I	CD focus lock input
25	SENSE	I	CD servo processor sense input
26	MLD	O	CD command load output
27	MDATA	O	CD command data output
28	MCLK	O	CD command clock output
29	RESTSW	I	CD detect SW input for the most inside
30	BLKCK	I	CD block clock input

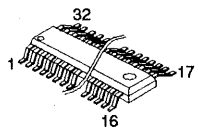
Pin No.	Mark	I/O	Function
31	RMT	I	Remote control input
32	DCDET	I	DC detect input
33	PCNT	O	Power control output
34	HALT	I	AC failure detect input
35	RESET	I	RESET input
36	XCIN	I	32.768 kHz sub clock
37	XCOUT	O	32.768 kHz sub clock
38	XIN	I	6.0 MHz Main clock
39	XOUT	O	6.0 MHz Main clock
40	VSS	—	Ground (0V)
41	MBP1	O	MPU beat proof output 1
42	MBP2	O	MPU beat proof output 2
43	DMUTE	O	CD digital mute output
44-48	LED5-1	O	CD changer status indicator
49-54	N.C.	—	No connection
55-64	GRD10-GRD1	O	Digit drive output (GRID DRIVE OUTPUT)
65-83	AND1-AND19	O	Segment drive output
			(ANODE DRIVE OUTPUT)
84-88	REG1-REG5	I	Region and Karaoke function setting input
89	JOG A	I	Jog input A
90	JOG B	I	Jog input B
91	VCC	I	Power supply(+5V)
92	PLLCE	O	Tuner PLL chip enable
93	PLLDA	O	Tuner PLL data output
94	PLLCK	O	Tuner PLL clock output
95	SD	I	Tuner signal DET input
96	STEREO	I	Tuner stereo DET input
97	DO	I	Tuner PLL if data input
98	VEE	—	Power supply (-30V)
99	AVSS	—	Analog ground (0V)
100	VREF	—	Reference for A-D

■ Terminal Guide of ICs, Transistors and Diodes

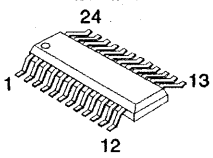
AN8389SE1



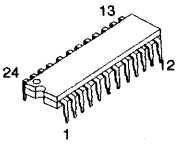
BH3854AFS-E2



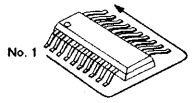
LA1832A
LC7218



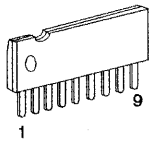
AN7345K



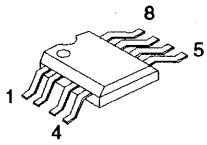
AN8835SBE1(28P)
BU2090F-E2(16P)
BU4052BCF-E2(16P)



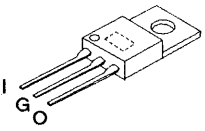
BA6418N



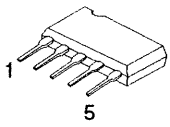
BA4558FDXE2



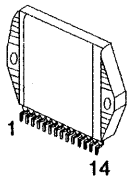
AN78M05



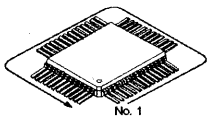
BA7755A



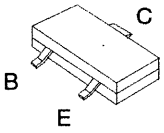
RSN35H1



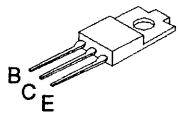
M38197MA133(100P)
MN662741RPA(80P)



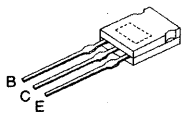
2SB709S



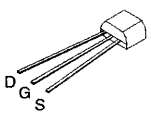
2SB1185E
2SD1762E



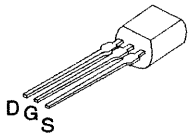
2SB1357ETA
2SD2037ETA



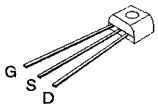
2SJ40CDTA
2SK381CTA



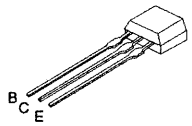
2SK301QTA



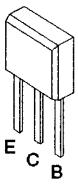
2SK544F-AC



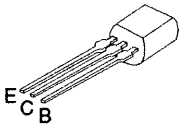
2SA933SSTA
2SC1740SRTA
RVTDTA143XST



2SC2784FTA
2SD1450STA
BA1L4LTA
BA1L4ZTA
BN1A4MTA

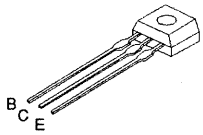


2SC1685RTA
2SC2001KTA
2SC2001L1TA
2SD965RTA

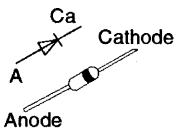


2SC2785FETA
2SC2785FTA
2SC2786MTA
2SC2787FL1TA
2SC2787LTA
BA1F4MTA
BA1L3ZTA

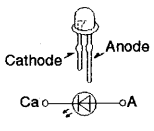
BN1L3NTA
BN1L4MTA



1SS291TA
MA29WATA
RVD1SR35TR
RVD1SS133TA

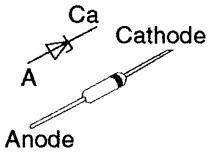


SLR505DCT31

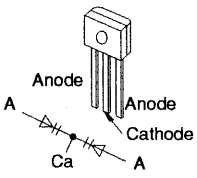


MTZJ12BTA
MTZJ15BTA
MTZJ15CTA
MTZJ5R1CTA
MTZJ6R2CTA
MTZJ6R8BTA

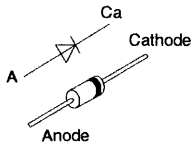
MTZJ8R2BTA
RVDMTZ10BTA
RVDMTZ11BTA
RVDMTZ13BTA
RVDMTZ4R7BTA
RVDMTZ5R6BTA



SVC211SPA-AL



1D3E
1N5402BM21



CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE 2 A 125V FUSE.

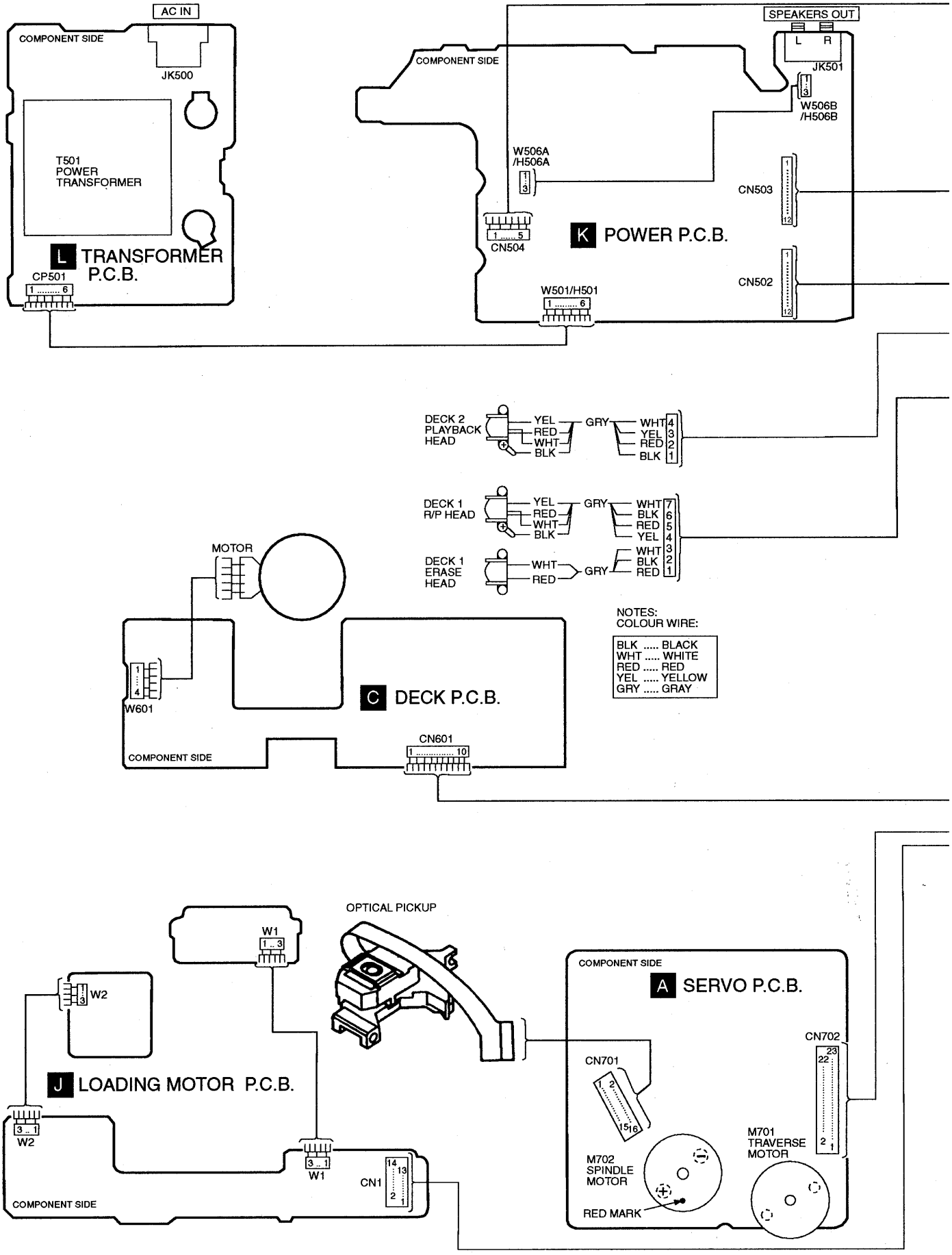
RISK OF FIRE-REPLACE FUSE AS MARKED.

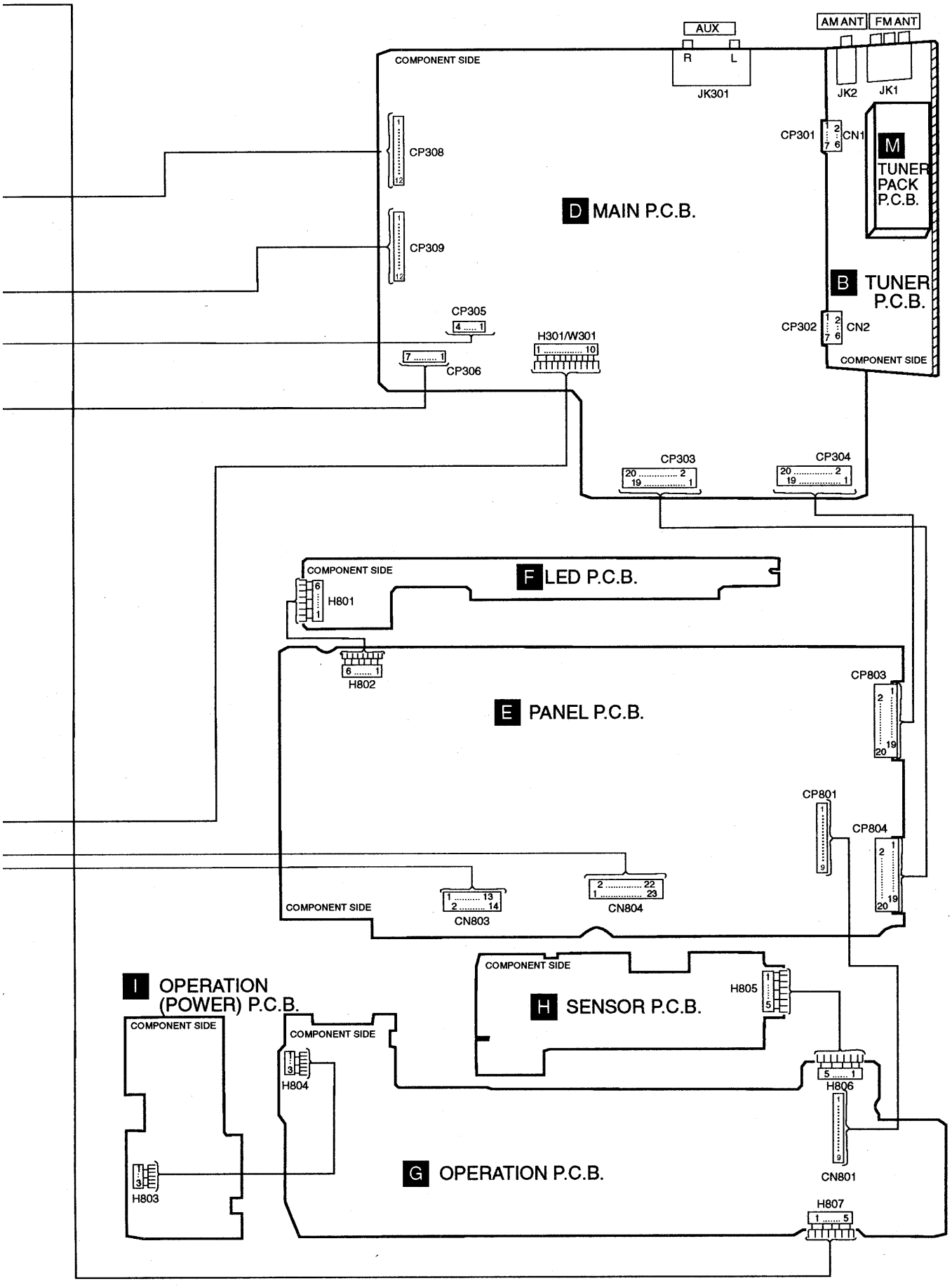
FUSE CAUTION

These symbols located near the fuse indicates that the fuse used is a fast operating type. For continued protection against fire harzard, replace with the same type fuse. For fuse rating, refer to the marking adjacent to the symbol.

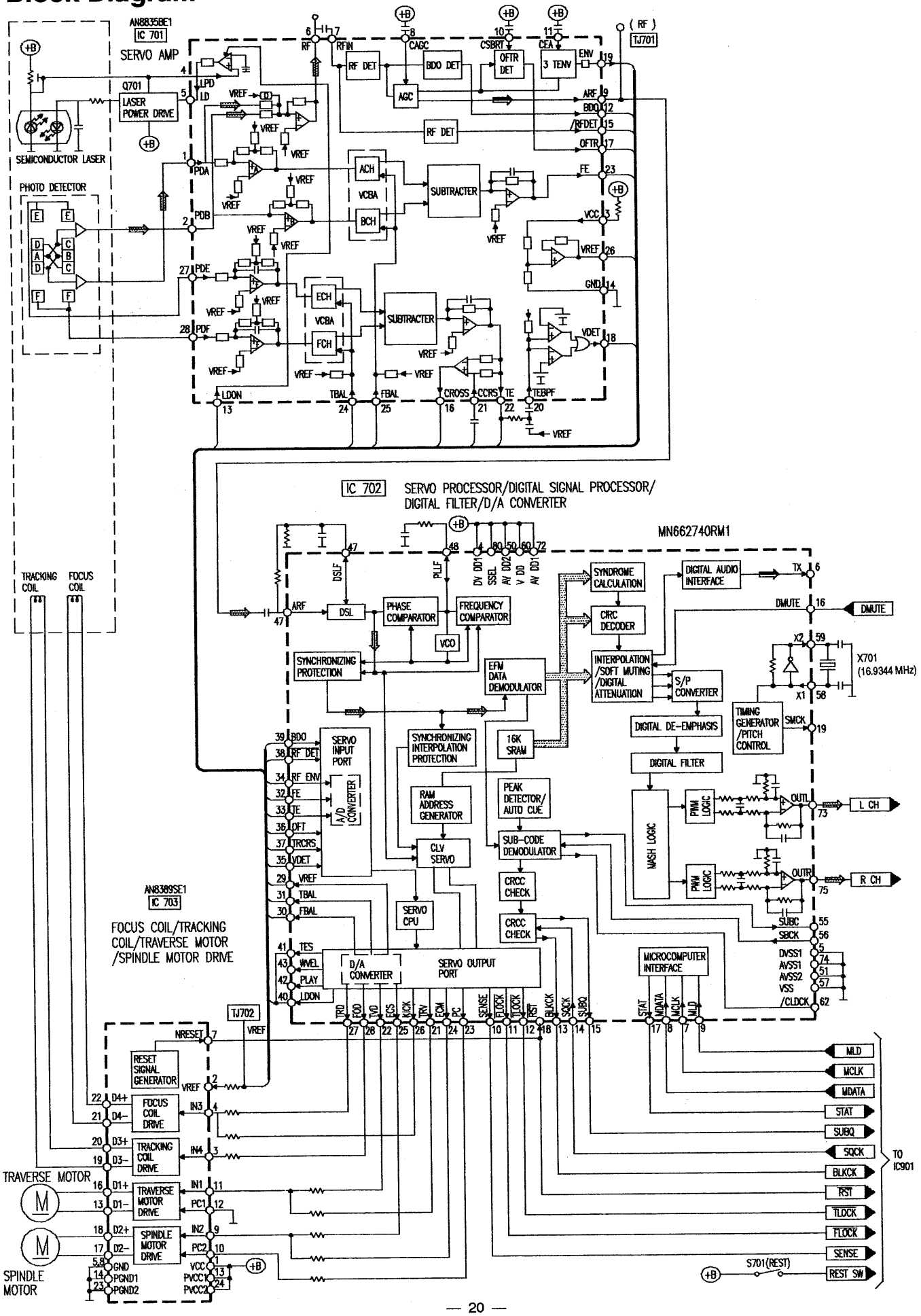
Ce symbole indique que le fusible utilisé est à rapide. Pour une protection permanente, n' utiliser que des fusibles de même type. Ce dernier est indiqué là qù le présent symbole est apposé.

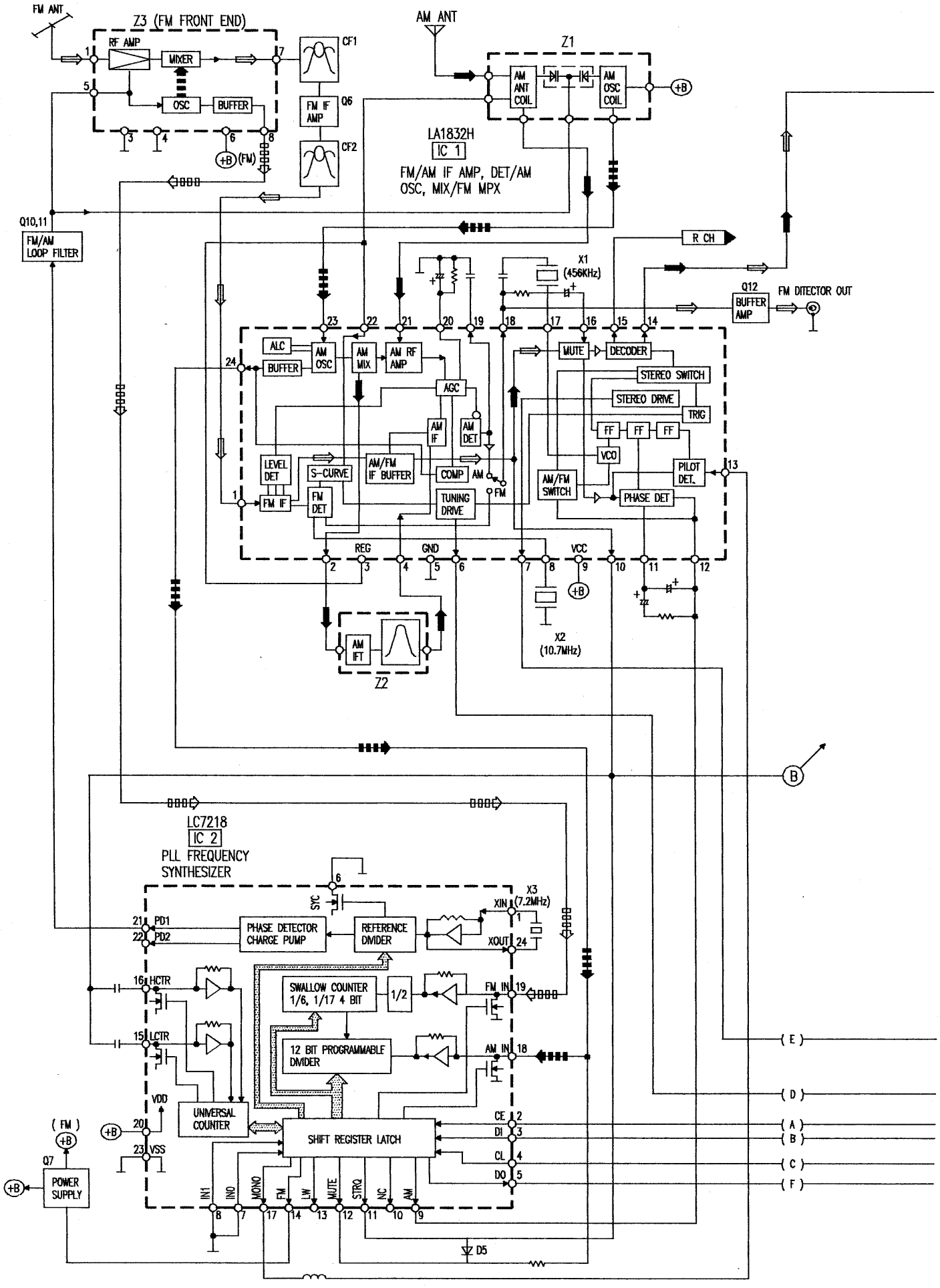
■ Wiring Connection Diagram

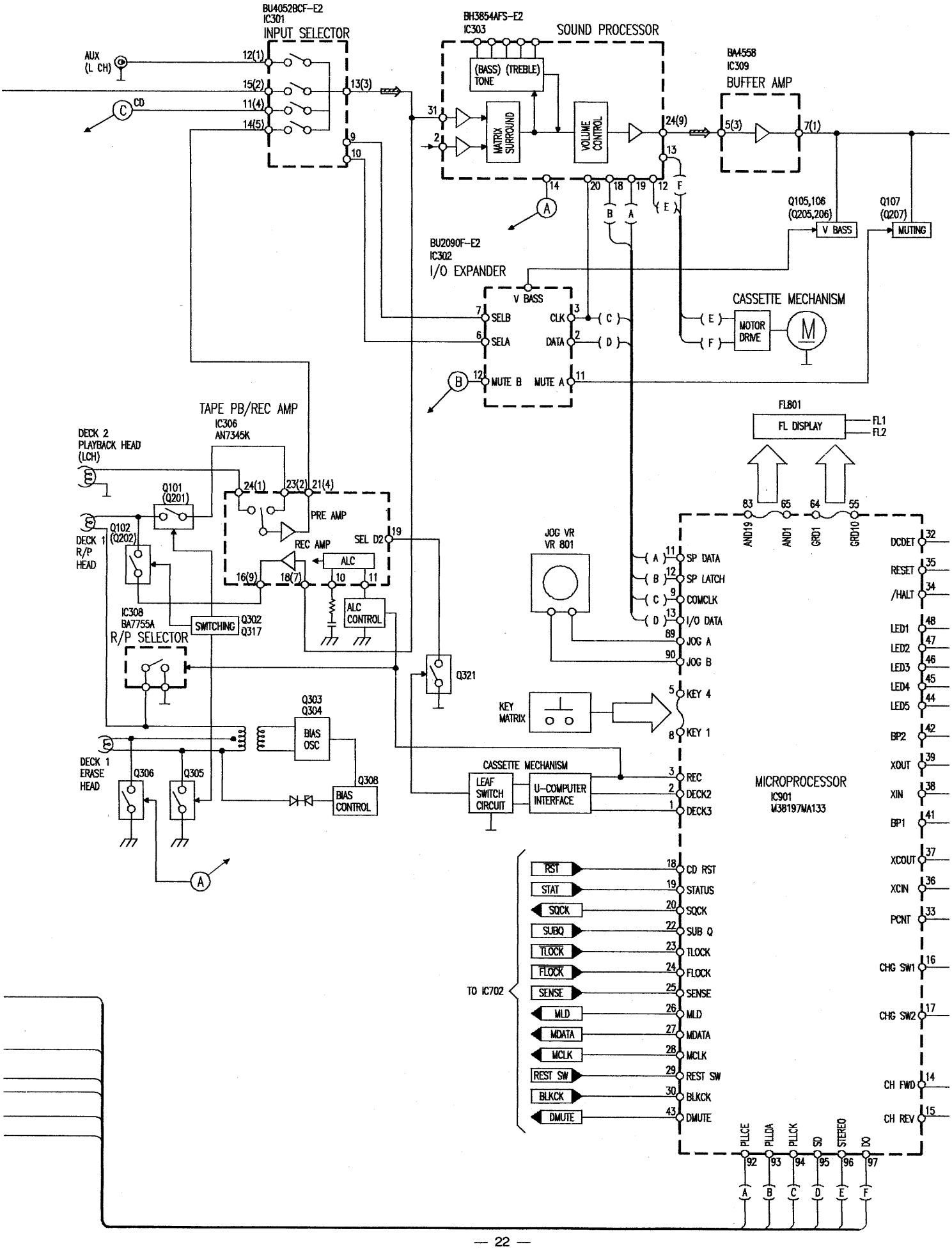


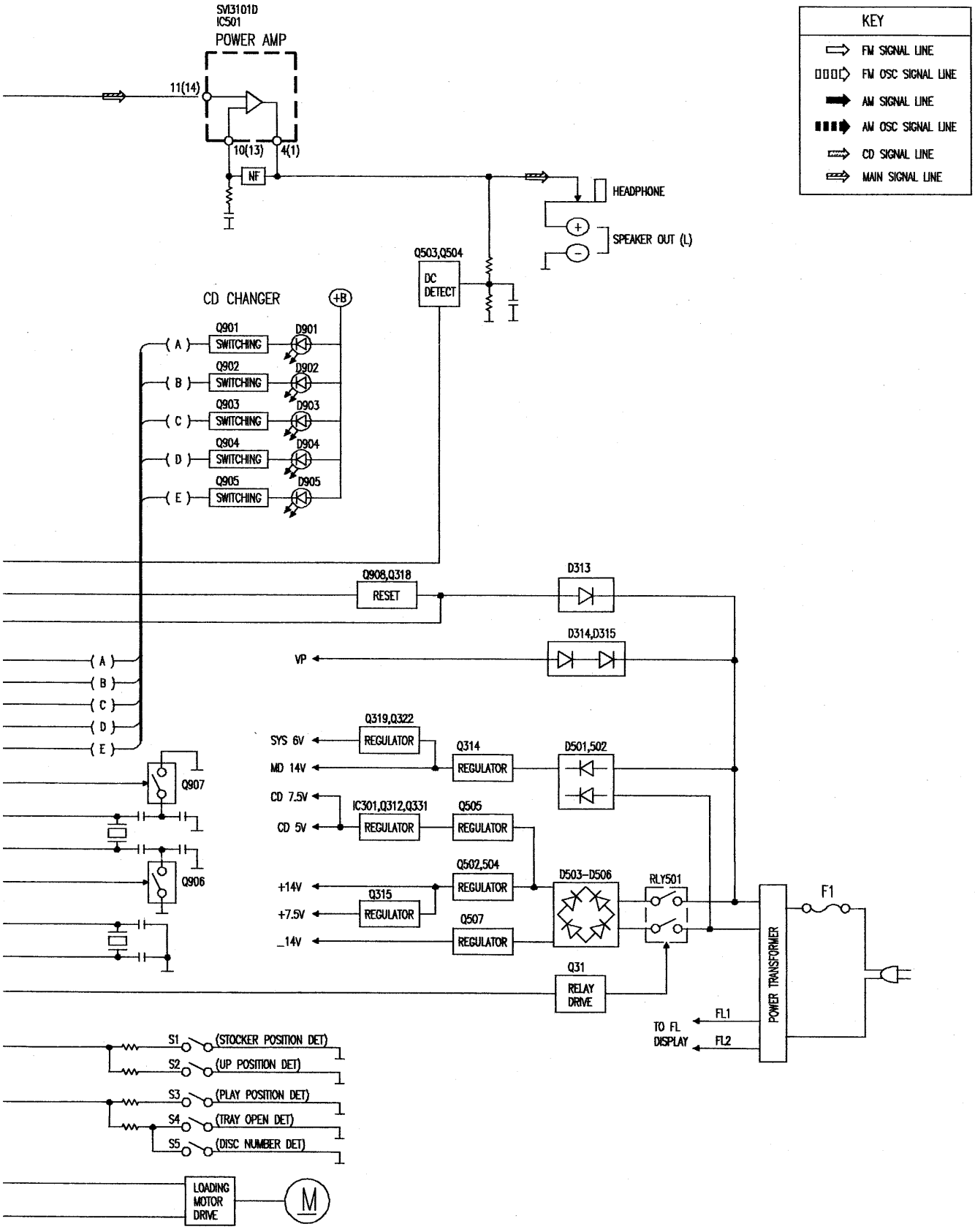

AUX
R
L
JK301
AM ANT
FM ANT
JK2
JK1
COMPONENT SIDE
CP308
CP309
D MAIN P.C.B.
CP301
CN1
M TUNER PACK P.C.B.
B TUNER P.C.B.
CP302
CN2
COMPONENT SIDE
CP305
CP306
H301/W301
CP303
CP304
COMPONENT SIDE
H801
F LED P.C.B.
H802
CP803
E PANEL P.C.B.
CP801
CP804
COMPONENT SIDE
CN803
CN804
COMPONENT SIDE
H805
H SENSOR P.C.B.
I OPERATION (POWER) P.C.B.
COMPONENT SIDE
COMPONENT SIDE
H804
H806
H803
G OPERATION P.C.B.
CN801
H807

■ Block Diagram



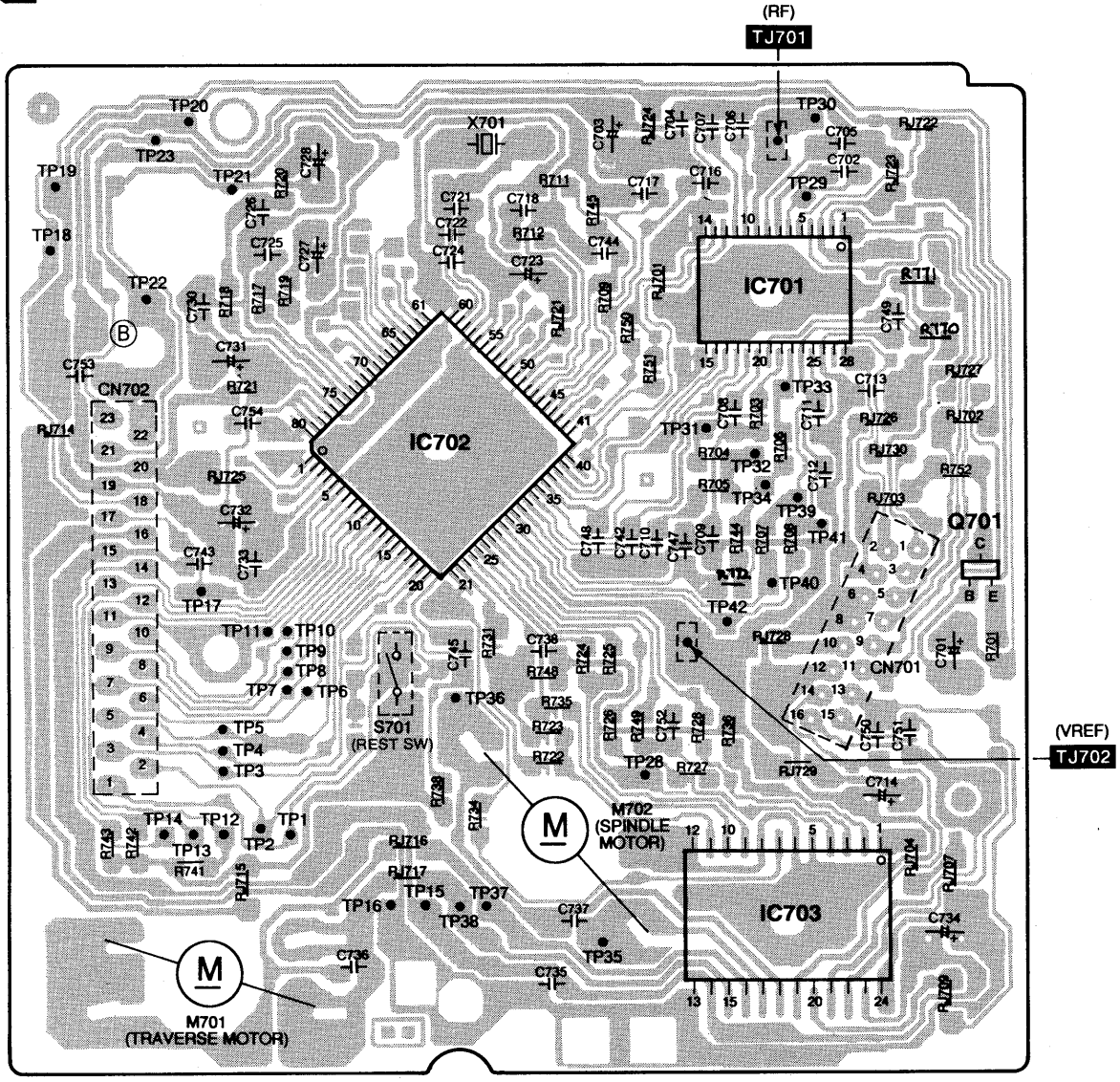

FM ANT
Z3 (FM FRONT END)
RF AMP
MIXER
OSC
BUFFER
CF1
FM IF AMP
Q6
CF2
(+B) (FM)
AM ANT
Z1
AM ANT COIL
AM OSC COIL
(+B)
LA1832H
IC 1
FM/AM IF AMP, DET/AM
OSC, MIX/FM MPX
Q10,11
FM/AM LOOP FILTER
R CH
X1 (456KHz)
Q12
BUFFER AMP
FM DITECTOR OUT
ALC
AM OSC
AM MIX
AM RF AMP
BUFFER
MUTE
DECODER
STEREO SWITCH
STEREO DRIVE
TRIG
AGC
AM IF
AM DET
FF
VCO
LEVEL DET
S-CURVE
AM/FM IF BUFFER
COMP
AM
FM
FM IF
FM DET
TUNING DRIVE
AM/FM SWITCH
PILOT DET.
PHASE DET
REG
GND
VCC
X2 (10.7MHz)
AM IFT
Z2
LC7218
IC 2
PLL FREQUENCY SYNTHESIZER
X3 (7.2MHz)
XIN
XOUT
SYC
PD1
PD2
PHASE DETECTOR CHARGE PUMP
REFERENCE DIVIDER
HCTR
LCTR
SWALLOW COUNTER 1/6, 1/17 4 BIT
1/2
FM IN
12 BIT PROGRAMMABLE DIVIDER
AM IN
VDD
VSS
UNIVERSAL COUNTER
SHIFT REGISTER LATCH
CE
DI
CL
DO
IN1
IN0
MONO
FM
LW
MUTE
STRQ
NC
AM
D5
(FM)
Q7
POWER SUPPLY
(E)
(D)
(A)
(B)
(C)
(F)


BU4052BCF-E2
IC301
INPUT SELECTOR
AUX
(L CH)
CD
BH3854AFS-E2
IC303
SOUND PROCESSOR
(BASS) (TREBLE)
TONE
MATRIX SURROUND
VOLUME CONTROL
BA4558
IC309
BUFFER AMP
Q105,106
(Q205,206)
V BASS
Q107
(Q207)
MUTING
BU2090F-E2
IC302
I/O EXPANDER
V BASS
SELB
SELA
CLK
DATA
MUTE B
MUTE A
CASSETTE MECHANISM
MOTOR DRIVE
TAPE PB/REC AMP
IC306
AN7345K
DECK 2
PLAYBACK HEAD
(LCH)
Q101
(Q201)
Q102
(Q202)
DECK 1
R/P
HEAD
PRE AMP
REC AMP
SEL D2
ALC
ALC CONTROL
IC308
BA7755A
R/P SELECTOR
SWITCHING
Q302
Q317
Q303
Q304
BIAS OSC
Q306
Q305
Q308
BIAS CONTROL
DECK 1
ERASE
HEAD
Q321
JOG VR
VR 801
KEY
MATRIX
CASSETTE MECHANISM
LEAF SWITCH CIRCUIT
U-COMPUTER INTERFACE
FL801
FL DISPLAY
FL1
FL2
AND19
AND1
GRD1
GRD10
SP DATA
SP LATCH
COMCLK
I/O DATA
JOG A
JOG B
KEY 4
KEY 1
REC
DECK2
DECK3
MICROPROCESSOR
IC901
M38197MA133
DCDET
RESET
/HALT
LED1
LED2
LED3
LED4
LED5
BP2
XOUT
XIN
BP1
XCOUT
XCIN
PCNT
CHG SW1
CHG SW2
CH FWD
CH REV
TO IC702
RST
STAT
SQCK
SUBQ
TLOCK
FLOCK
SENSE
MLD
MDATA
MCLK
REST SW
BLKCK
DMUTE
CD RST
STATUS
SQCK
SUB Q
TLOCK
FLOCK
SENSE
MLD
MDATA
MCLK
REST SW
BLKCK
DMUTE
PLLCE
PLLDA
PLLCK
SD
STEREO
DO

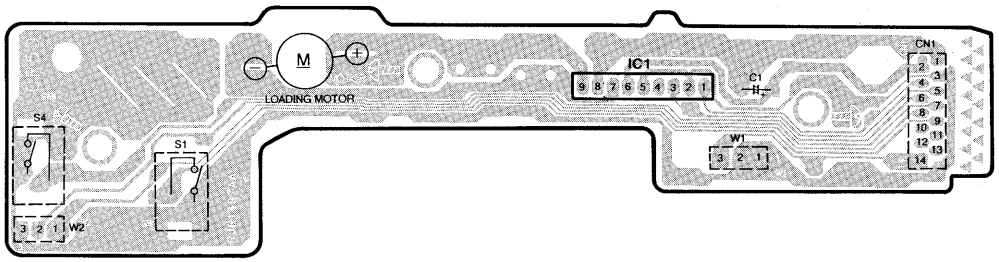

SVI3101D
IC501
POWER AMP
11(14)
10(13)
4(1)
NF
HEADPHONE
SPEAKER OUT (L)
Q503,Q504
DC DETECT
CD CHANGER
+B
Q901 SWITCHING D901
Q902 SWITCHING D902
Q903 SWITCHING D903
Q904 SWITCHING D904
Q905 SWITCHING D905
A
B
C
D
E
Q908,Q318
RESET
D313
D314,D315
VP
Q907
Q906
Q319,Q322
REGULATOR
SYS 6V
Q314
MD 14V
D501,502
CD 7.5V
IC301,Q312,Q331
CD 5V
Q505
Q502,504
+14V
Q315
+7.5V
Q507
-14V
D503-D506
RLY501
F1
Q31
RELAY DRIVE
POWER TRANSFORMER
FL1
TO FL DISPLAY
FL2
S1 (STOCKER POSITION DET)
S2 (UP POSITION DET)
S3 (PLAY POSITION DET)
S4 (TRAY OPEN DET)
S5 (DISC NUMBER DET)
LOADING MOTOR DRIVE
M
KEY
FM SIGNAL LINE
FM OSC SIGNAL LINE
AM SIGNAL LINE
AM OSC SIGNAL LINE
CD SIGNAL LINE
MAIN SIGNAL LINE

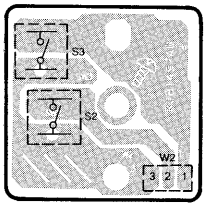
■ Printed Circuit Board

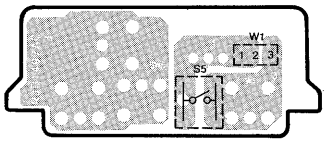
A SERVO P.C.B. (REPX0109)



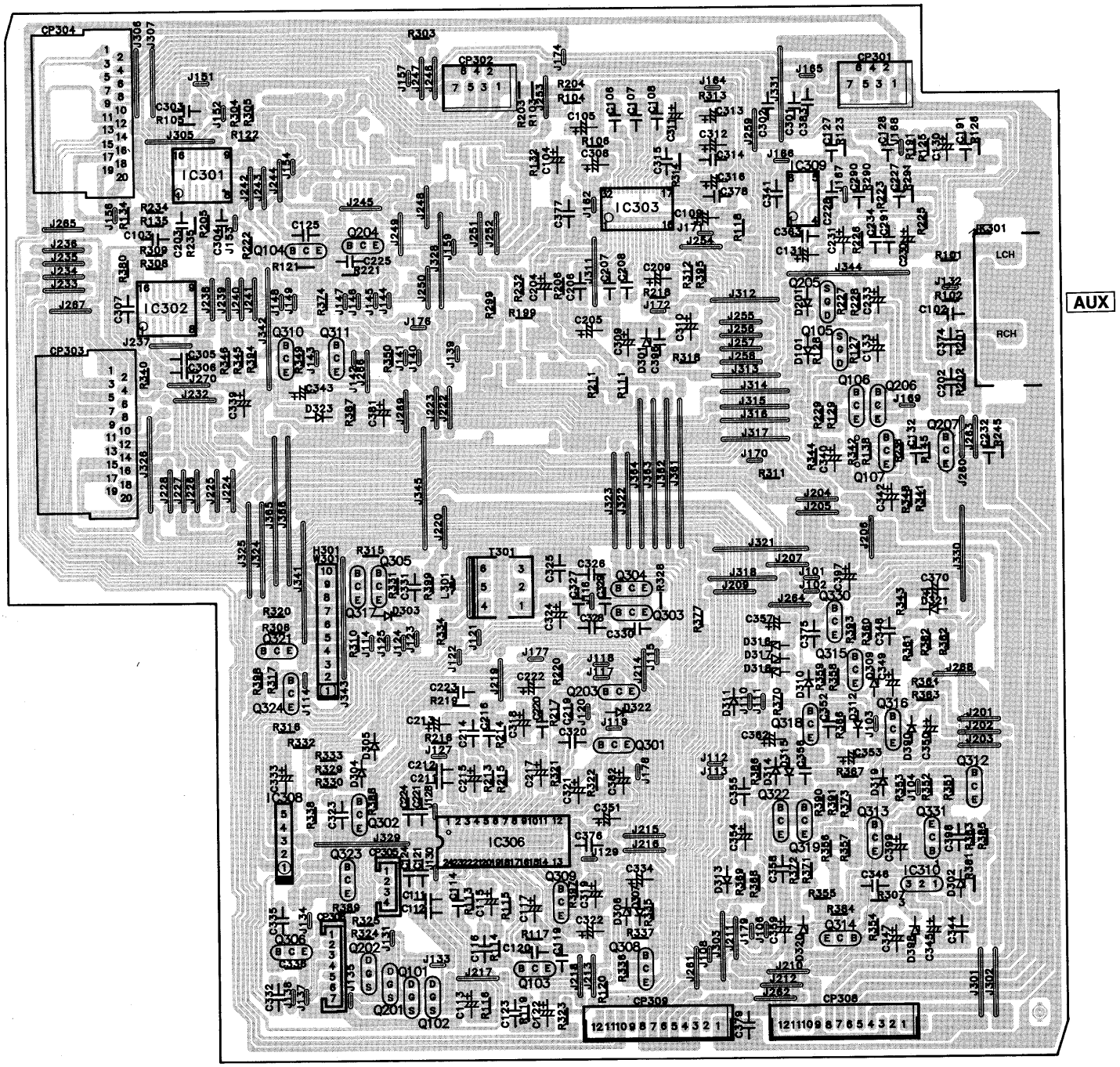
J LOADING MOTOR P.C.B. (REP2182A-N)



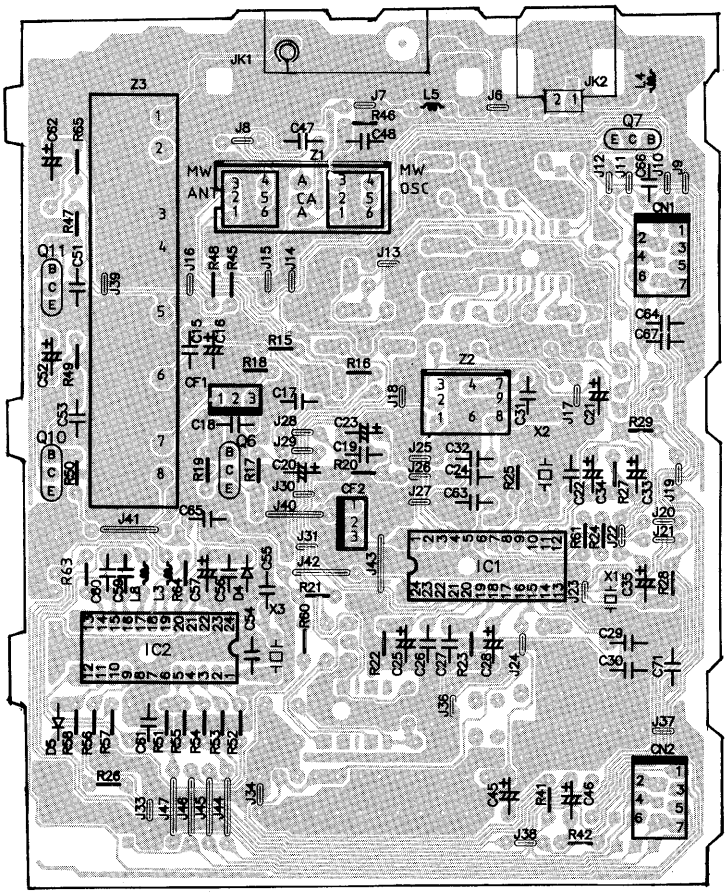




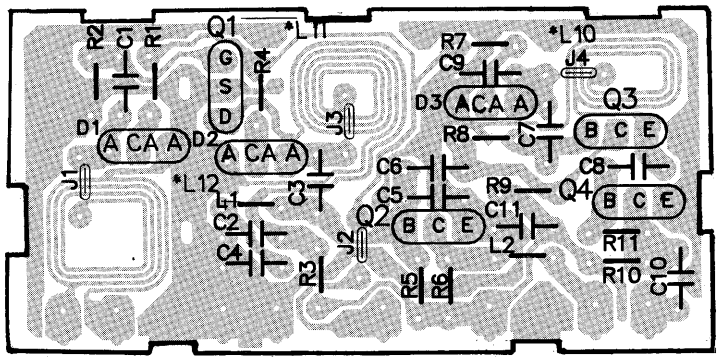
D MAIN P.C.B. (REPX0095A)



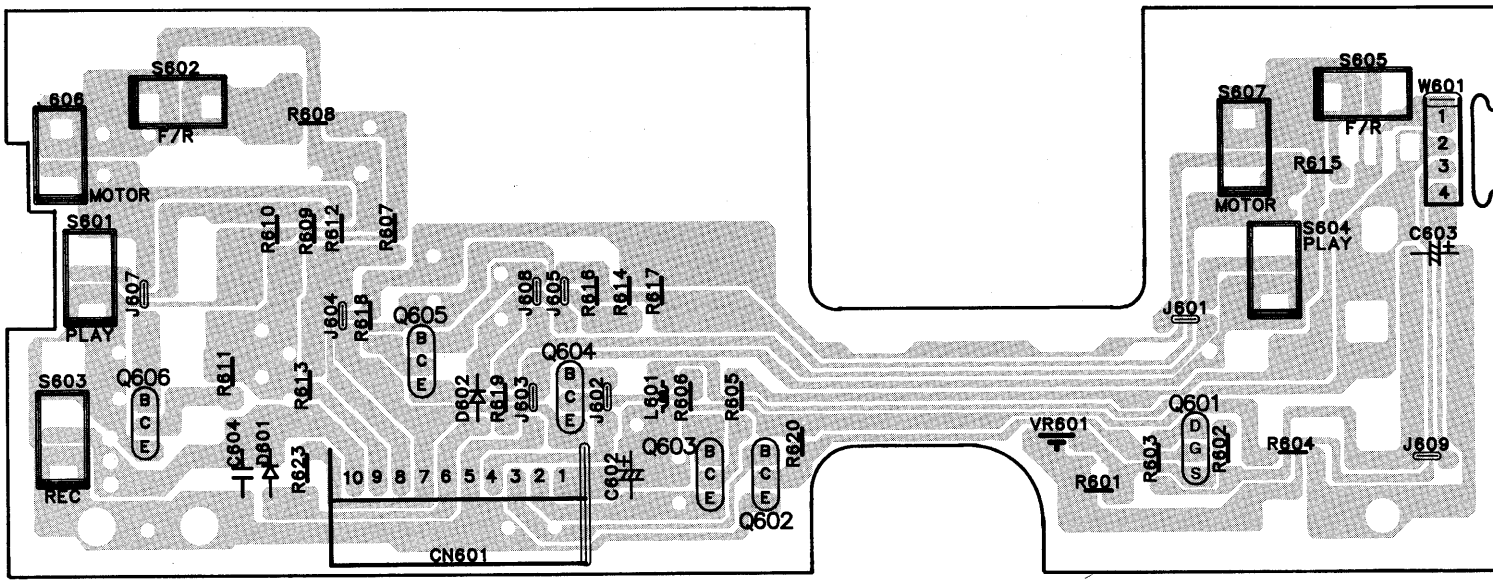
B TUNER P.C.B. (REP2000E)



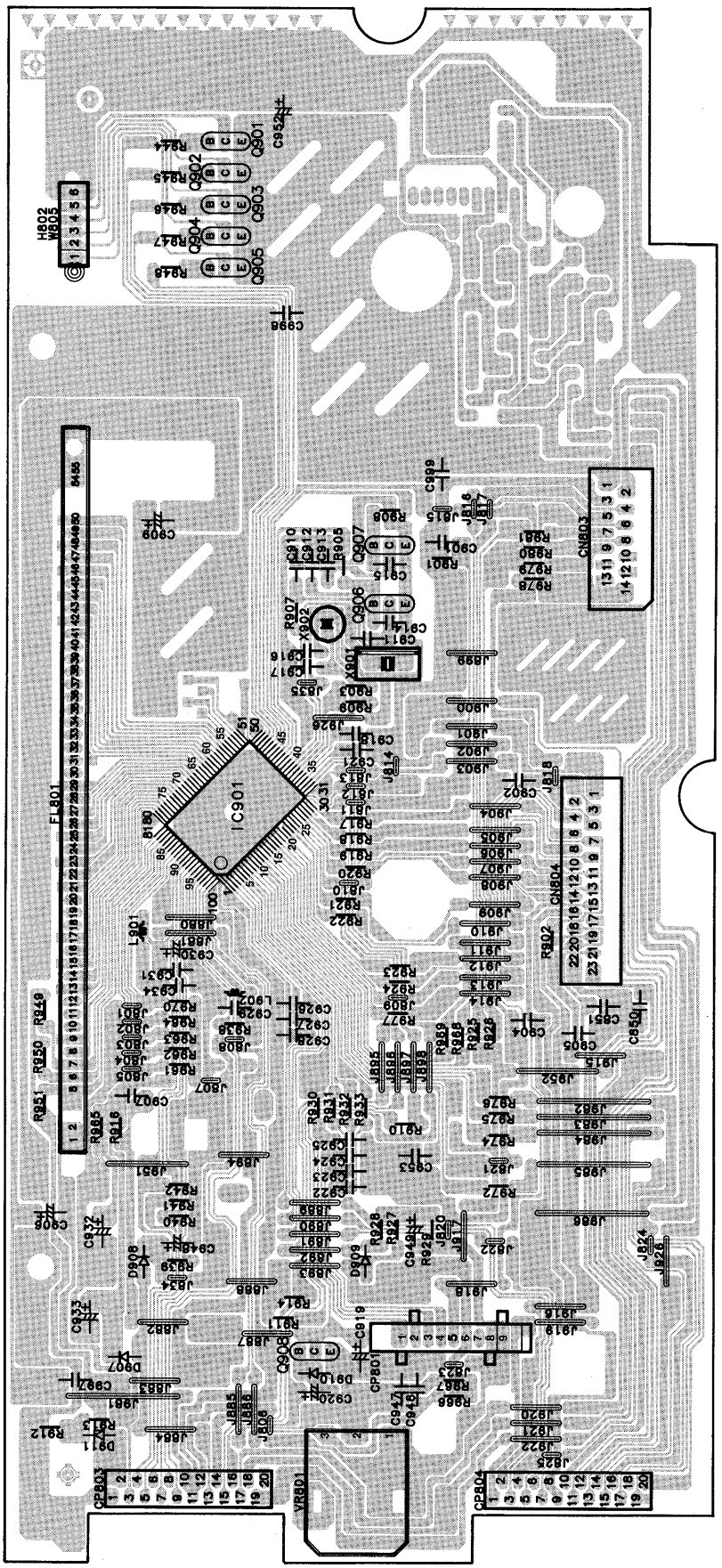
M TUNER PACK P.C.B. (REP1999B)



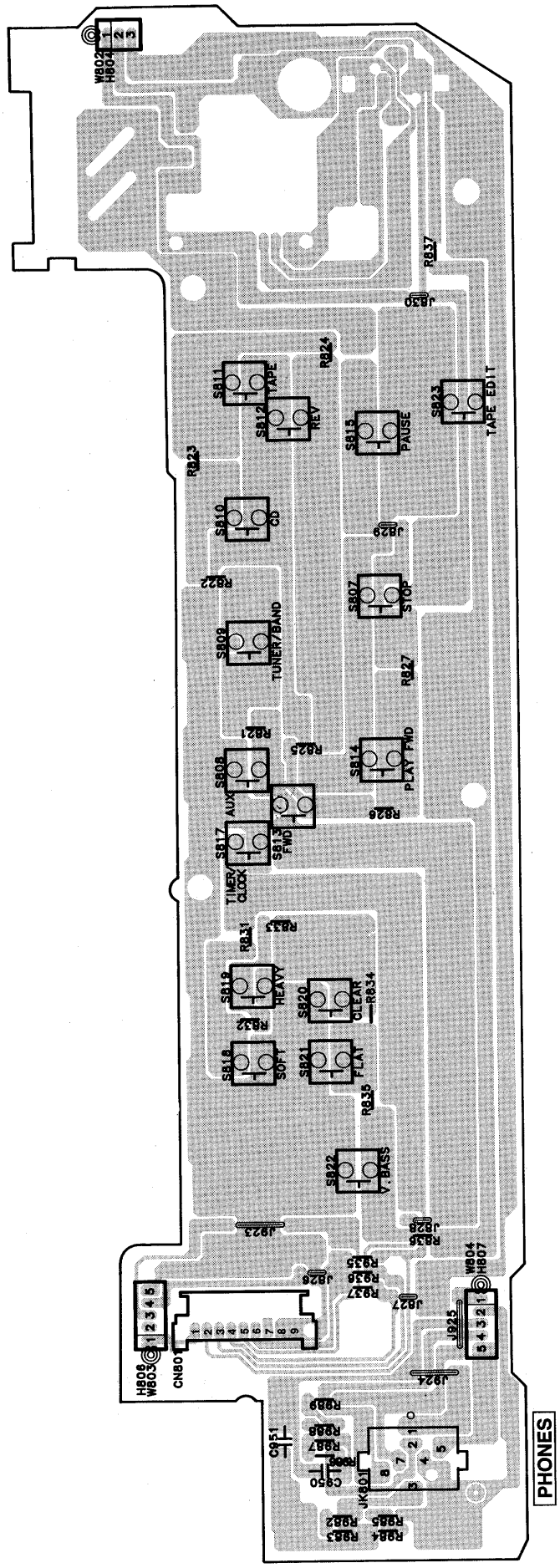
C DECK P.C.B. (REPX0097A)



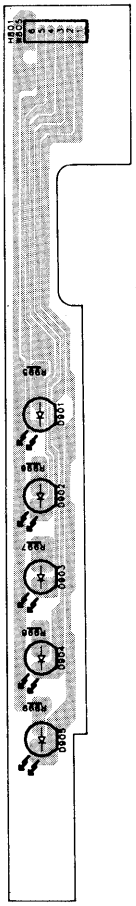
E PANEL P.C.B. (REPX0096A)



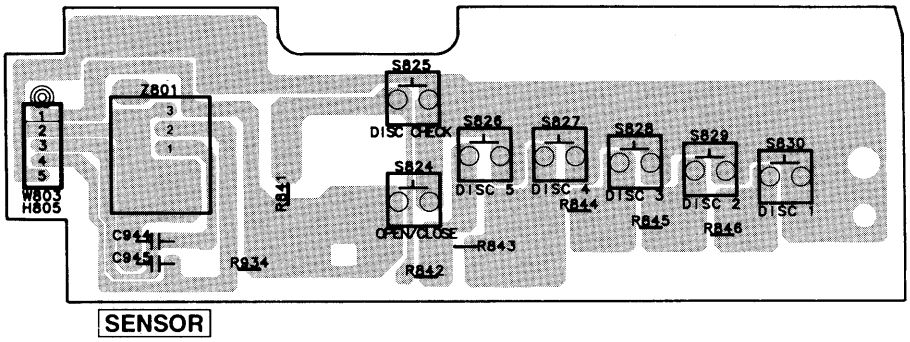
G OPERATION P.C.B. (REPX0096A)



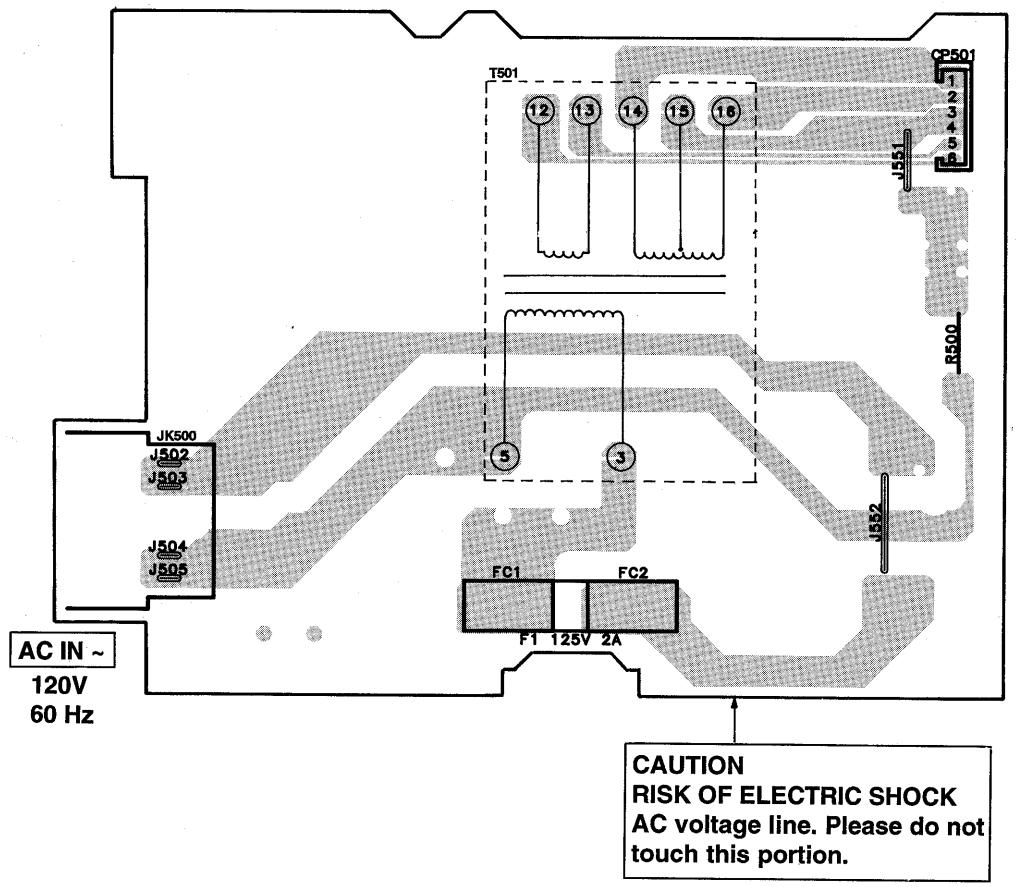
F LED P.C.B. (REPX0096A)



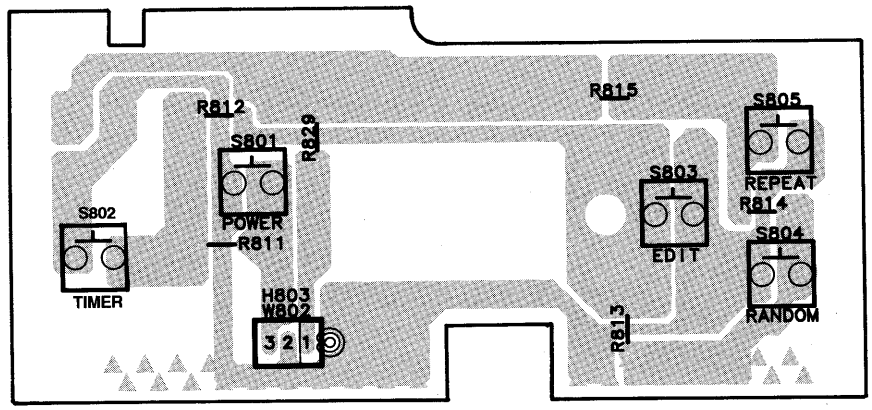
H SENSOR P.C.B. (REPX0096A)



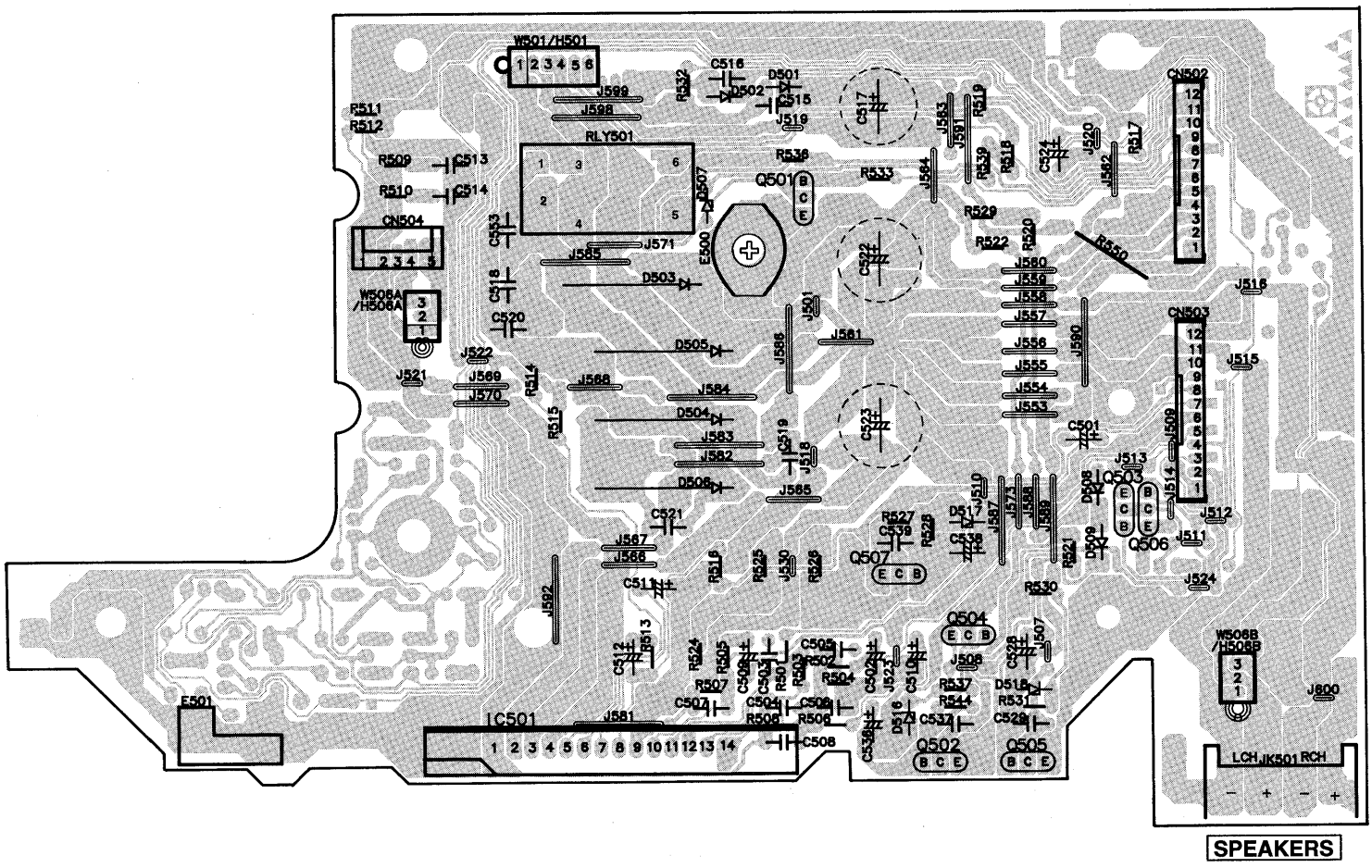
L TRANSFORMER P.C.B. (REPX0101A)



I OPERATION(POWER) P.C.B. (REPX0096A)



K POWER P.C.B. (REPX0101A)



■ Schematic Diagram

(All schematic diagrams may be modified at any time with the development of new technology)

Note :

< for Servo circuit > (Page 33)

- **S701** : Reset switch

< for Panel circuit, Sensor Circuit, Operation Circuit and Operation(Power) circuit > (Page 38)

- **S801** : Power switch
- **S802** : Timer switch
- **S803** : Easy Edit switch
- **S804** : Random switch
- **S805** : Repeat switch
- **S807** : Stop switch
- **S808** : AUX switch
- **S809** : Tuner/Band switch
- **S810** : CD switch
- **S811** : Tape switch
- **S812** : Reverse skip switch
- **S813** : Forward skip switch
- **S814** : Play forward switch
- **S815** : Pause switch
- **S817** : Timer/Clock switch
- **S818** : Soft switch
- **S819** : Heavy switch
- **S820** : Clear switch
- **S821** : Flat switch
- **S822** : V. Bass switch
- **S823** : Tape Edit switch
- **S824** : CD Open/Close switch
- **S825** : CD Disc Check switch
- **S826** : CD Disc 5 switch
- **S827** : CD Disc 4 switch
- **S828** : CD Disc 3 switch
- **S829** : CD Disc 2 switch
- **S830** : CD Disc 1 switch
- **VR801** : Volume control

< for Deck circuit > (Page 42)

- **S601** : Deck 1 Tape Playback switch.
- **S602** : Deck 1 Fastwind select switch.
- **S603** : Deck 1 Record select switch.
- **S604** : Deck 2 Tape Playback switch.
- **S605** : Deck 2 Fastwind select switch.
- **S606** : Deck 1 Motor switch.
- **S607** : Deck 2 Motor switch.
- **VR601** : Tape speed adjustment.

< for Loading Motor circuit > (Page 43)

- **S1, S4** : Leaf switch.
- **S2, S3, S5** : Mecha switch.

•Signal line

: +B line
: –B line
: FM/AM signal line
: Main signal line
: Playback signal line
: Record signal line
: CD signal line
: FM signal line
: AM signal line
: AM OSC signal line
: FM OSC signal line
: Aux signal line

•The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis.
Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

No mark: Playback << >>.....Rec { }: Tuner (( )): CD ( ).....AM < >.....FM

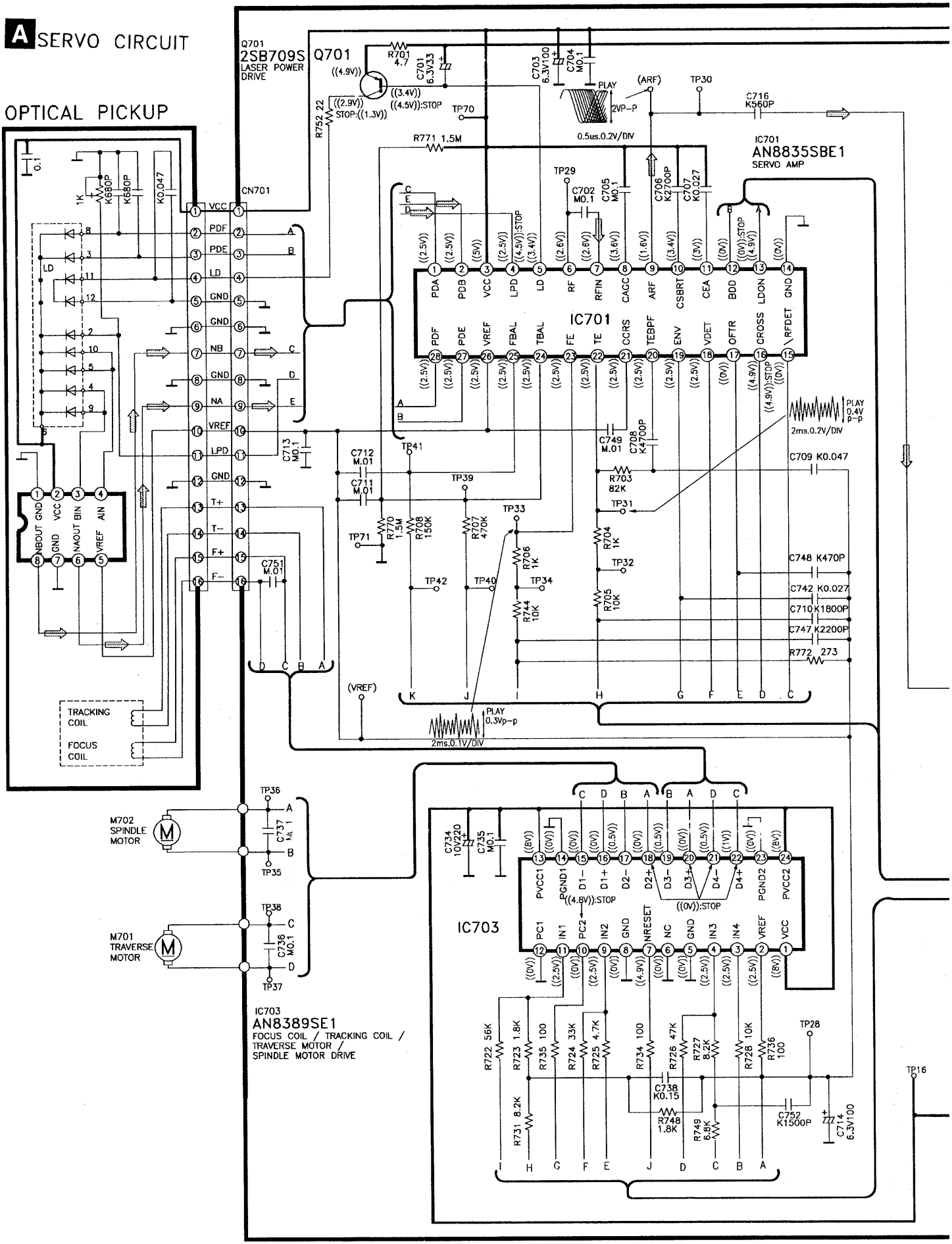
•Importance safety notice:

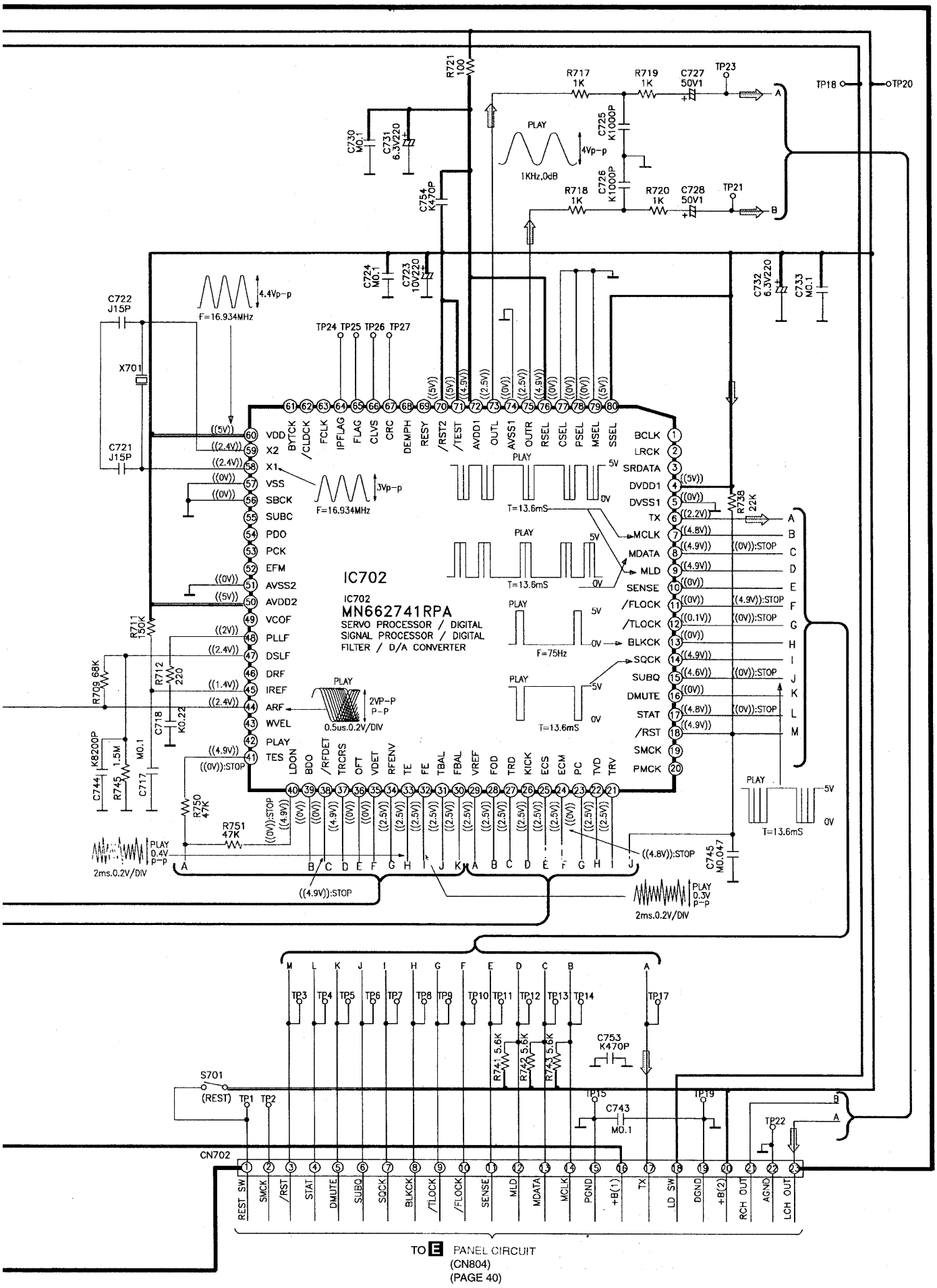
Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

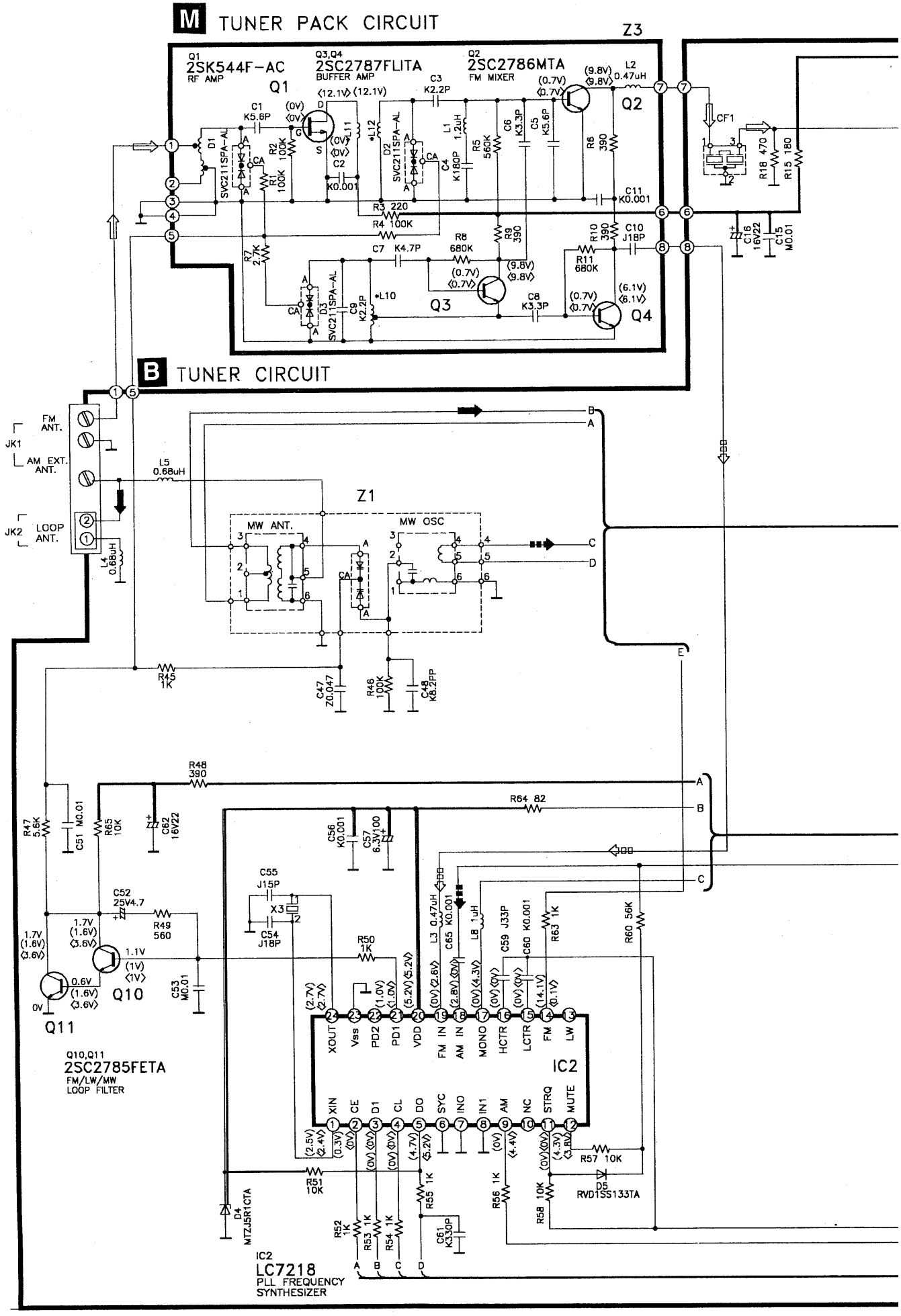
Caution !

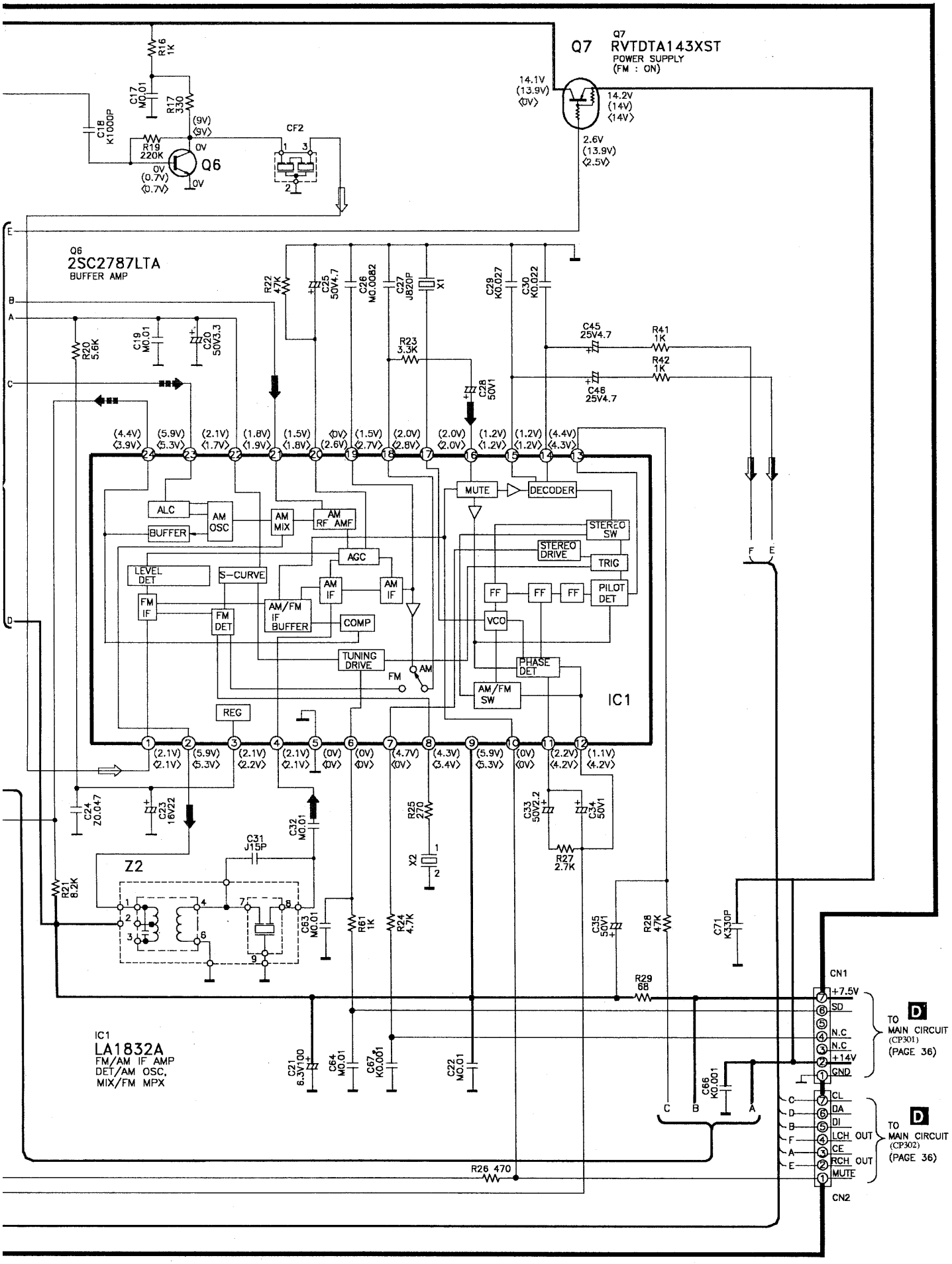
IC, LSI and VLSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.
•Cover the parts boxes made of plastics with aluminium foil.
•Put a conductive mat on the work table.
•Ground the soldering iron.
•Do not touch the pins of IC, LSI or VLSI with fingers directly.

■ Schematic Diagram

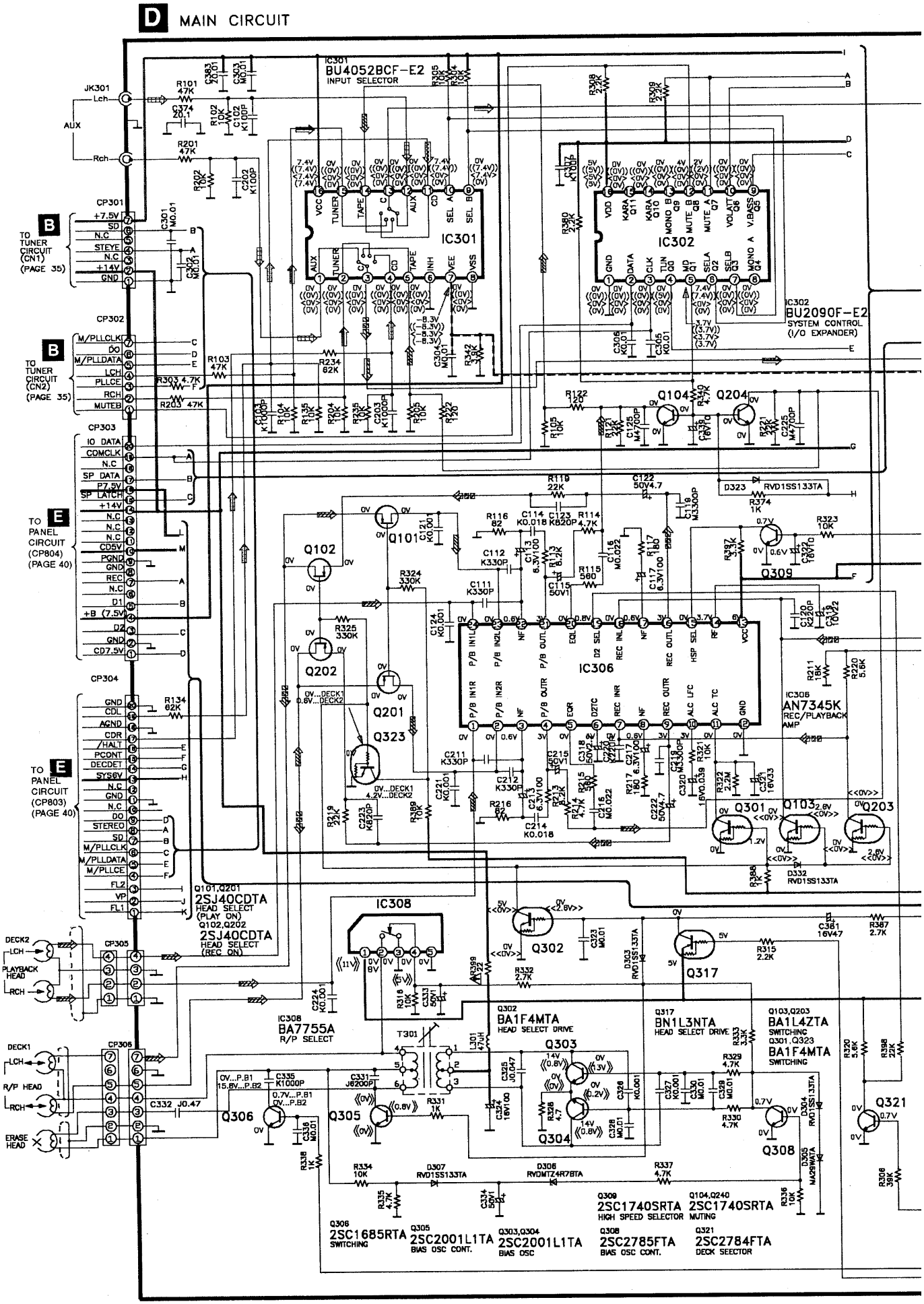


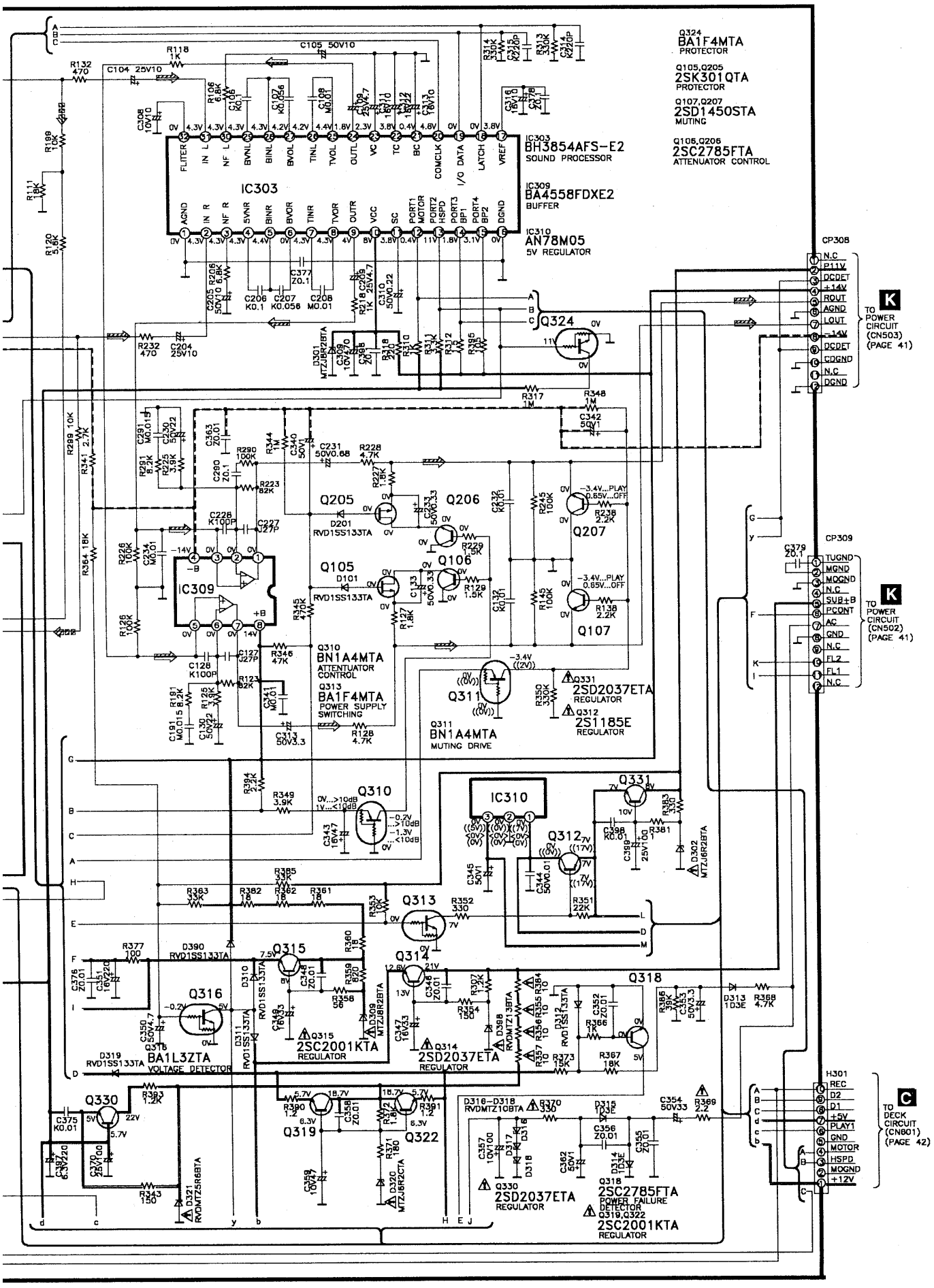

IC702
IC702
MN662741RPA
SERVO PROCESSOR / DIGITAL
SIGNAL PROCESSOR / DIGITAL
FILTER / D/A CONVERTER
X701
F=16.934MHz
4.4Vp-p
3Vp-p
F=16.934MHz
PLAY
1KHz,0dB
4Vp-p
T=13.6mS
F=75Hz
2VP-P
P-P
0.5us.0.2V/DIV
2ms.0.2V/DIV
0.4V
p-p
0.3V
p-p
S701
(REST)
CN702
REST SW
SMCK
/RST
STAT
DMUTE
SUBQ
SOCK
BLKCK
/TLOCK
/FLOCK
SENSE
MLD
MDATA
MCLK
PGND
+B(1)
TX
LD SW
DGND
+B(2)
RCH OUT
AGND
LCH OUT
TO E PANEL CIRCUIT
(CN804)
(PAGE 40)

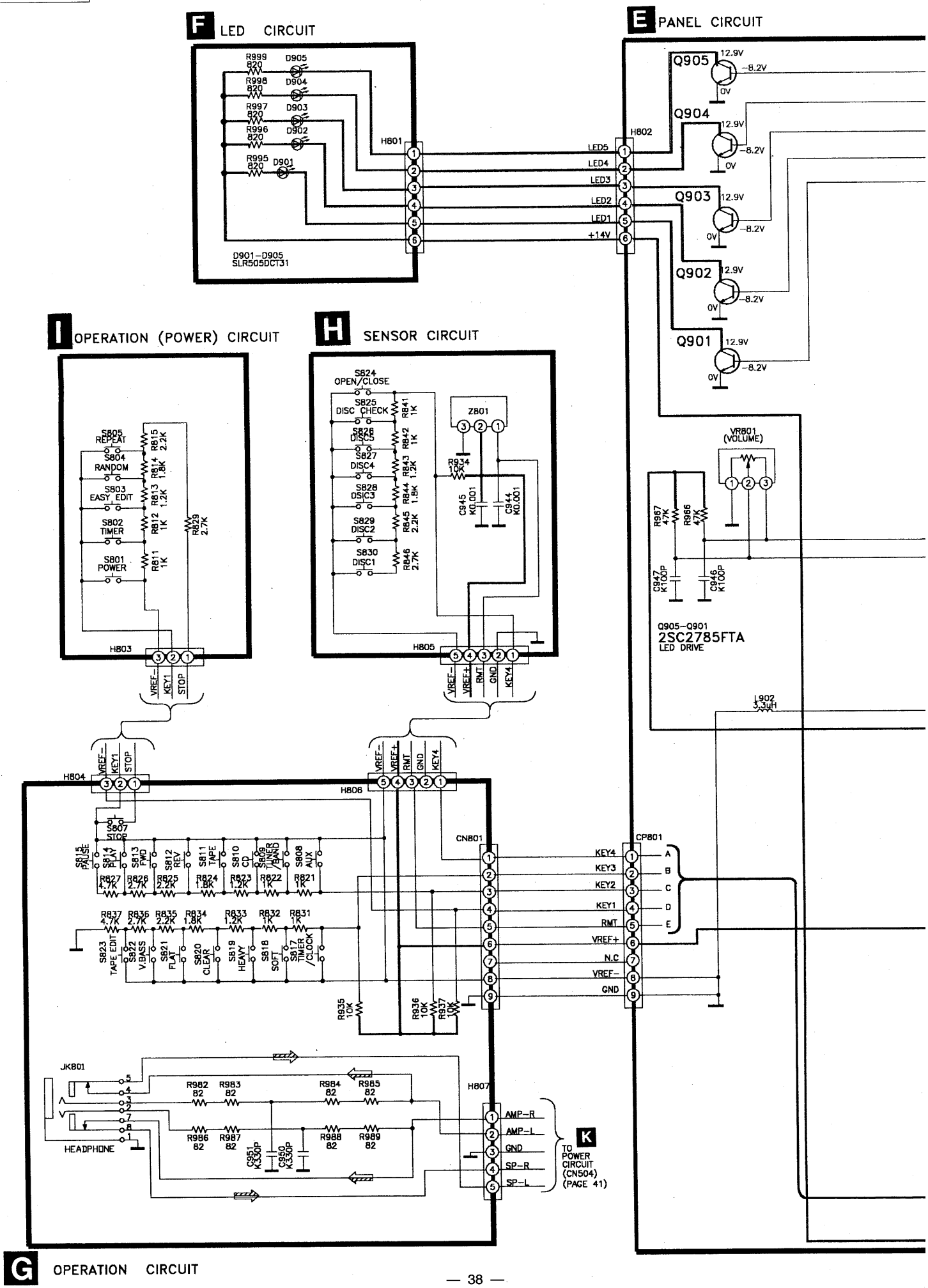

M TUNER PACK CIRCUIT
Z3
Q1
2SK544F-AC
RF AMP
Q3,Q4
2SC2787FLITA
BUFFER AMP
Q2
2SC2786MTA
FM MIXER
Q2
Q3
Q4
B TUNER CIRCUIT
JK1
FM ANT.
AM EXT. ANT.
JK2
LOOP ANT.
L5 0.68uH
L4 0.68uH
Z1
MW ANT.
MW OSC
R45 1K
C47 Z0.047
R46 100K
C48 K6.2PP
R48 390
R64 82
R47 5.6K
C51 M0.01
R65 10K
C62 16V22
C56 K0.001
C57 6.3V100
C55 J15P
C52 25V4.7
R49 560
X3
C54 J18P
R50 1K
C53 M0.01
Q10
Q11
Q10,Q11
2SC2785FETA
FM/LW/MW
LOOP FILTER
L3 0.47uH
C65 K0.001
L8 1uH
C59 J33P
C60 K0.001
R63 1K
R60 56K
IC2
XOUT
Vss
PD2
PD1
VDD
FM IN
AM IN
MONO
HCTR
LCTR
FM
LW
XIN
CE
DI
CL
DO
SYC
INO
IN1
AM
NC
STRQ
MUTE
R57 10K
D5
RVD1SS133TA
R51 10K
R55 1K
R56 1K
R58 10K
D4
MTZJ5R1CTA
R52 1K
R53 1K
R54 1K
C61 K330P
IC2
LC7218
PLL FREQUENCY SYNTHESIZER

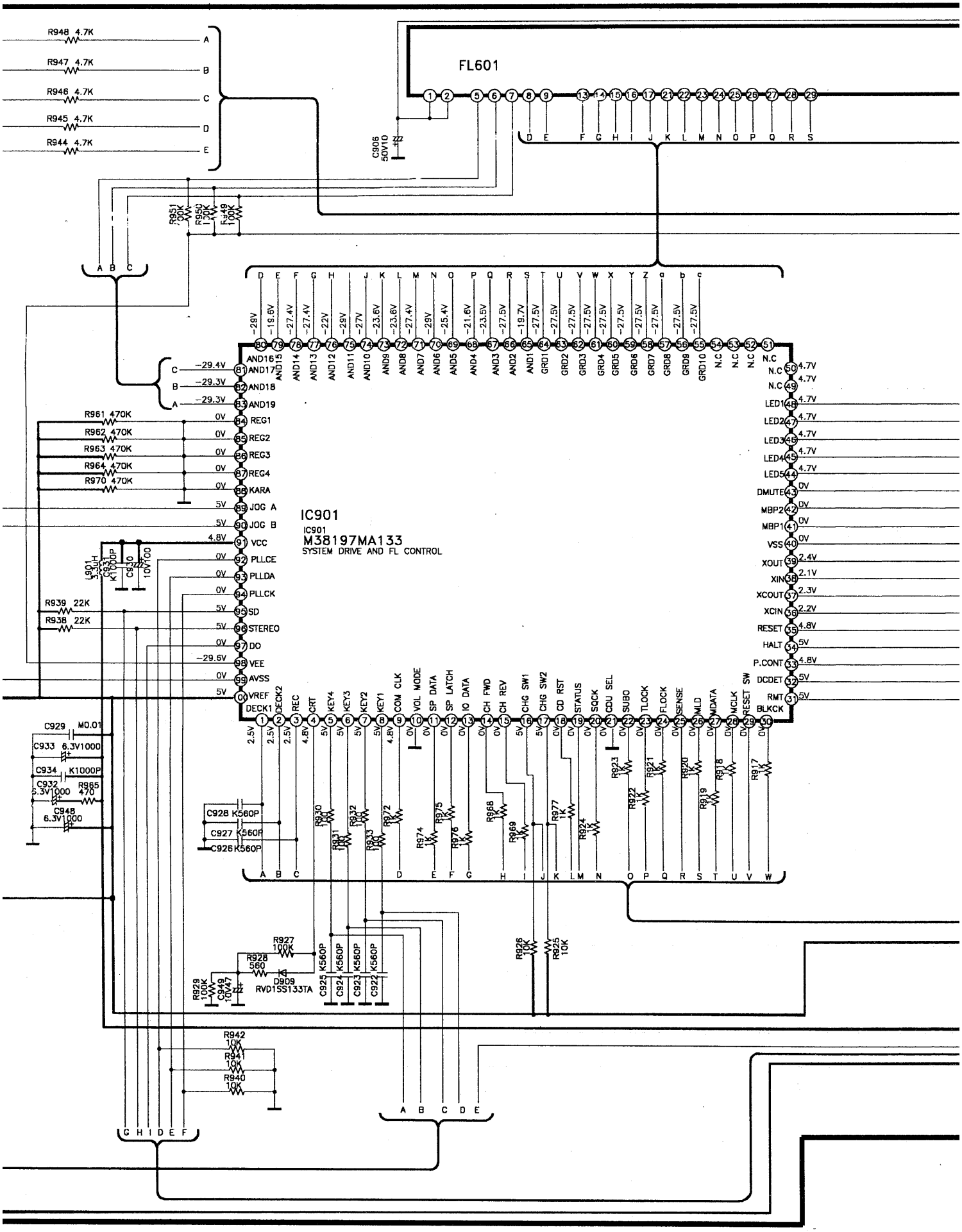

Q7
RVTDTA143XST
POWER SUPPLY
(FM : ON)
Q6
2SC2787LTA
BUFFER AMP
IC1
LA1832A
FM/AM IF AMP
DET/AM OSC,
MIX/FM MPX
Z2
CF2
X1
X2
CN1
CN2
MUTE
DECODER
STEREO SW
STEREO DRIVE
TRIG
PILOT DET
VCO
PHASE DET
AM/FM SW
TUNING DRIVE
AGC
COMP
ALC
AM OSC
AM MIX
AM RF AMF
BUFFER
LEVEL DET
S-CURVE
FM IF
FM DET
AM/FM IF BUFFER
AM IF
FF
REG
+7.5V
SD
N.C
N.C
+14V
GND
CL
DA
DI
LCH OUT
CE
RCH OUT
MUTE
TO MAIN CIRCUIT (CP301) (PAGE 36)
TO MAIN CIRCUIT (CP302) (PAGE 36)

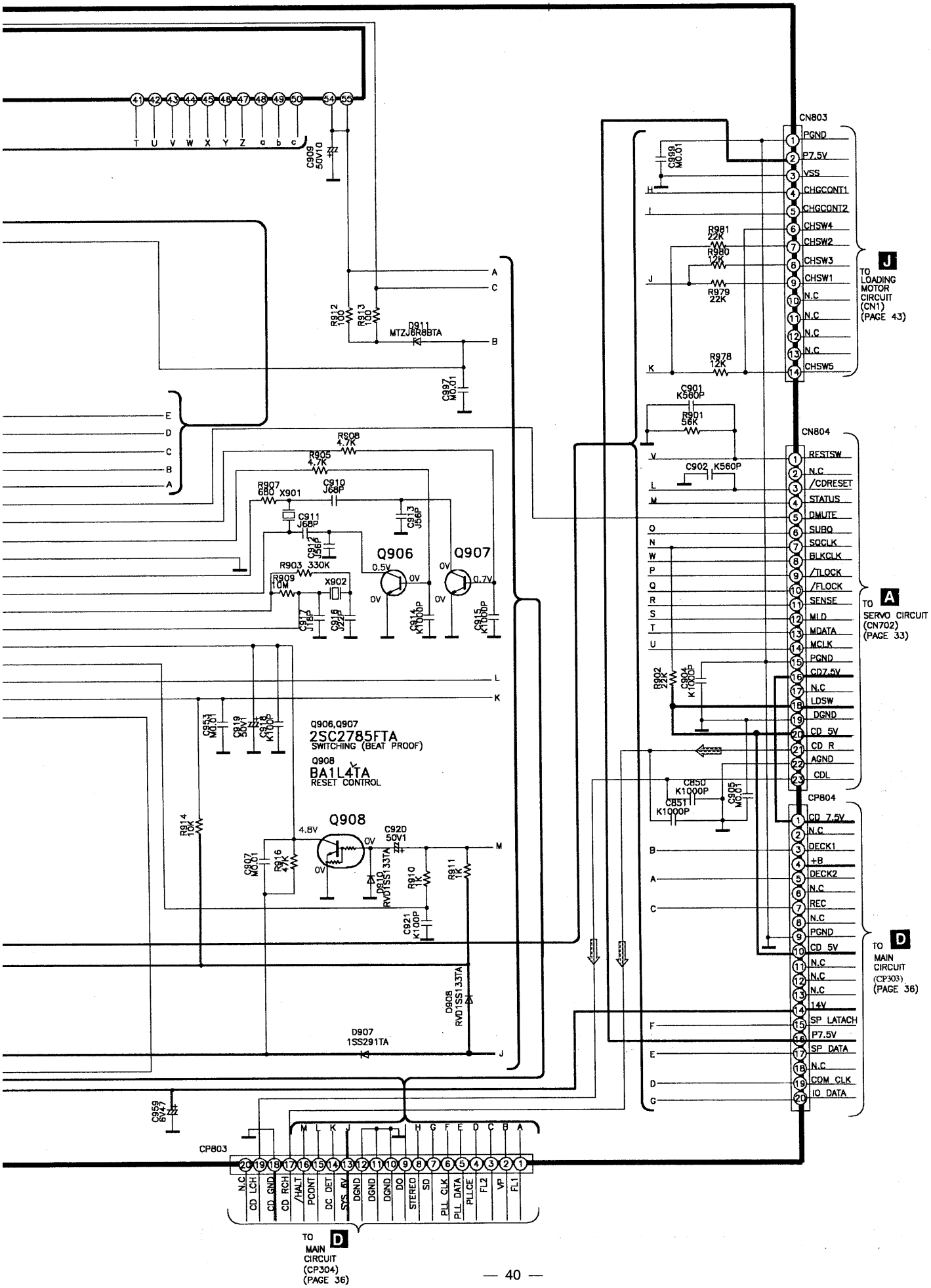
D MAIN CIRCUIT

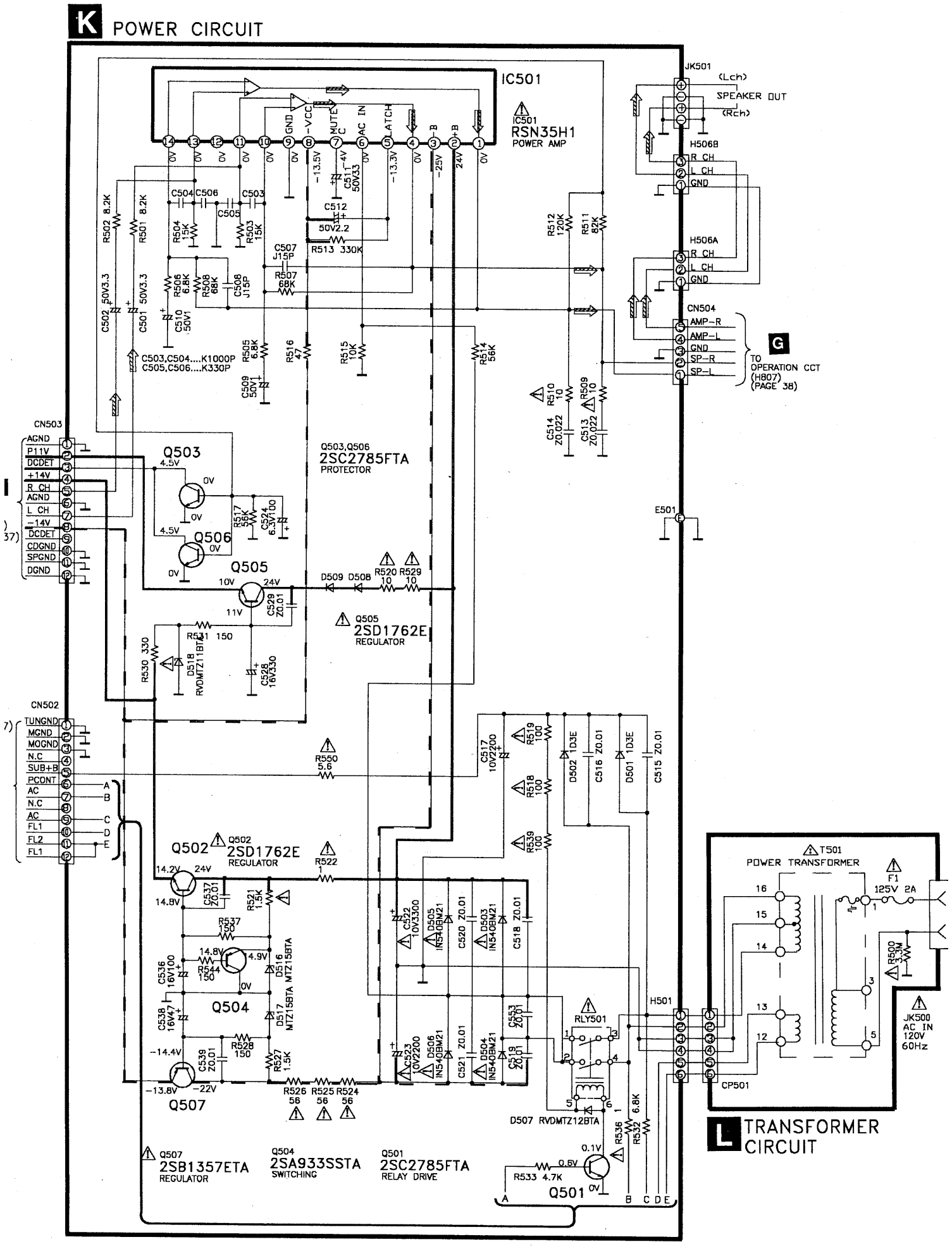



Q324
BA1F4MTA
PROTECTOR
Q105,Q205
2SK301QTA
PROTECTOR
Q107,Q207
2SD1450STA
MUTING
Q106,Q206
2SC2785FTA
ATTENUATOR CONTROL
IC303
BH3854AFS-E2
SOUND PROCESSOR
IC309
BA4558FDXE2
BUFFER
IC310
AN78M05
5V REGULATOR
Q310
BN1A4MTA
ATTENTUATOR CONTROL
Q313
BA1F4MTA
POWER SUPPLY SWITCHING
Q311
BN1A4MTA
MUTING DRIVE
Q331
2SD2037ETA
REGULATOR
Q312
2S1185E
REGULATOR
Q315
2SC2001KTA
REGULATOR
Q314
2SD2037ETA
REGULATOR
Q316
BA1L3ZTA
VOLTAGE DETECTOR
Q330
2SD2037ETA
REGULATOR
Q318
2SC2785FTA
POWER FAILURE DETECTOR
Q319,Q322
2SC2001KTA
REGULATOR
CP308
N.C
P11V
DCDET
+14V
ROUT
AGND
LOUT
-14V
DCDET
CDGND
N.C
DGND
TO POWER CIRCUIT (CN503) (PAGE 41)
CP309
TUGND
MGND
MDGND
N.C
SUB+B
PCONT
AC
GND
N.C
FL2
FL1
N.C
TO POWER CIRCUIT (CN502) (PAGE 41)
H301
REC
D2
D1
+5V
PLAY1
GND
MOTOR
HSPD
MDGND
+12V
TO DECK CIRCUIT (CN801) (PAGE 42)

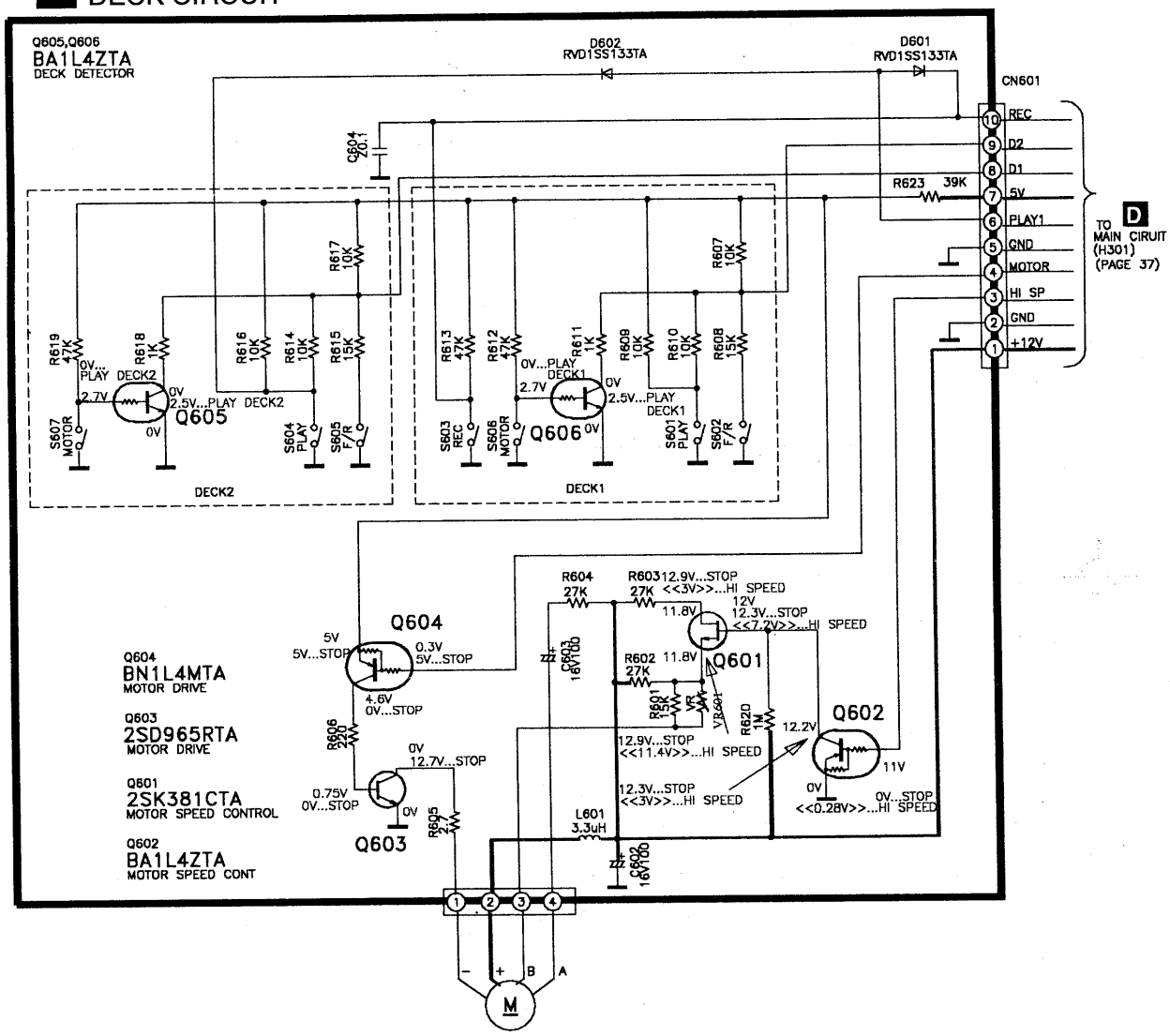

F LED CIRCUIT
E PANEL CIRCUIT
I OPERATION (POWER) CIRCUIT
H SENSOR CIRCUIT
G OPERATION CIRCUIT
D901–D905
SLR505DCT31
Q905–Q901
2SC2785FTA
LED DRIVE
HEADPHONE
TO POWER CIRCUIT (CN504) (PAGE 41)

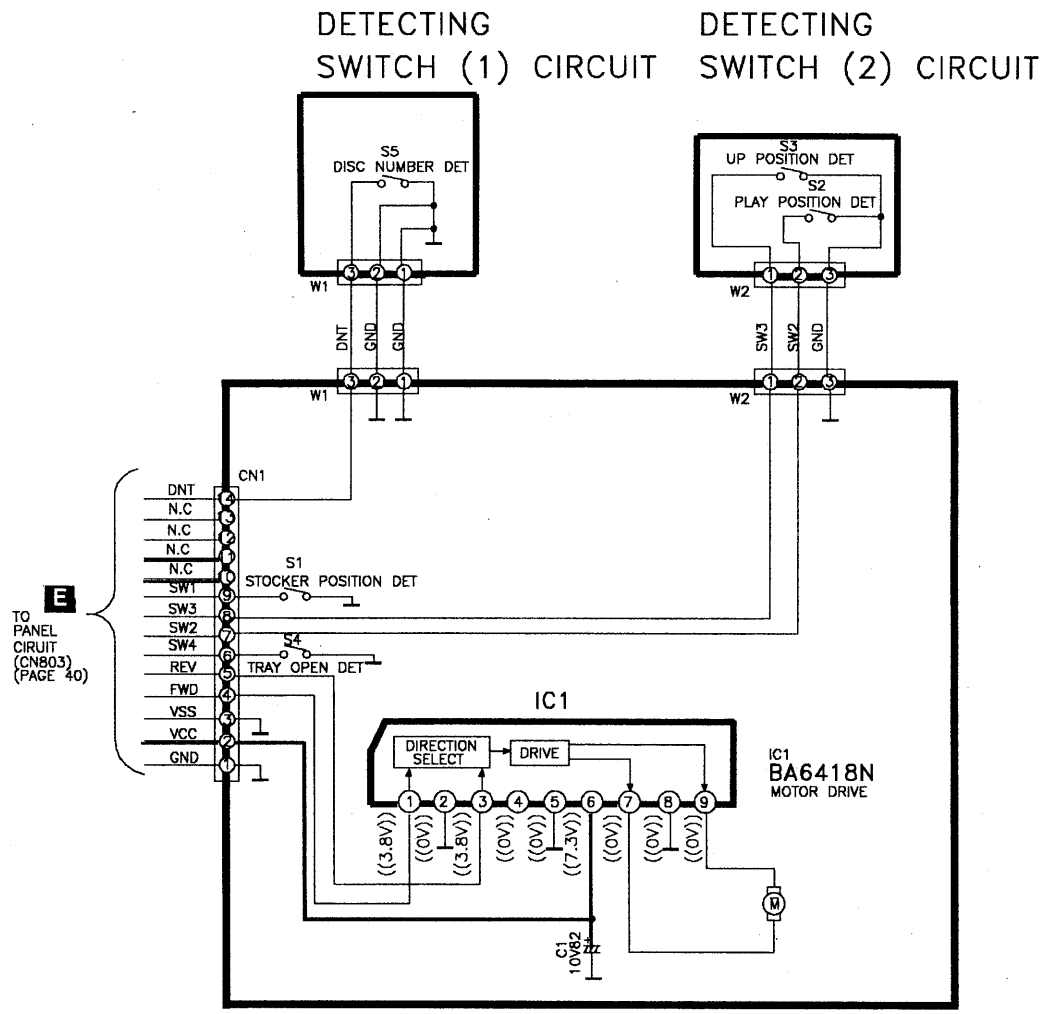

FL601
IC901
IC901
M38197MA133
SYSTEM DRIVE AND FL CONTROL
R948 4.7K
R947 4.7K
R946 4.7K
R945 4.7K
R944 4.7K
R951 100K
R950 10K
R949 1K
R961 470K
R962 470K
R963 470K
R964 470K
R970 470K
R939 22K
R938 22K
L901 33UH
C931 K1000P
C930 10V100
C929 M0.01
C933 6.3V1000
C934 K1000P
C932 6.3V1000
R965 470
C948 6.3V1000
C928 K560P
C927 K560P
C926 K560P
R927 100K
R928 560
D909 RVD1SS133TA
C925 K560P
C924 K560P
C923 K560P
C922 K560P
R929 100K
C949 10V47
R926 10K
R925 10K
R942 10K
R941 10K
R940 10K
C906 50V10
AND16
AND17
AND18
AND19
REG1
REG2
REG3
REG4
KARA
JOG A
JOG B
VCC
PLLCE
PLLDA
PLLCK
SD
STEREO
DO
VEE
AVSS
VREF
DECK1
DECK2
REC
CRT
KEY4
KEY3
KEY2
KEY1
COM CLK
VOL MODE
SP DATA
SP LATCH
IO DATA
CH FWD
CH REV
CHG SW1
CHG SW2
CD RST
STATUS
SQCK
CDU SEL
SUBO
TLOCK
FLOCK
SENSE
MLD
MDATA
MCLK
RESET SW
BLKCK
RMT
DCDET
P.CONT
HALT
RESET
XCIN
XCOUT
XIN
XOUT
VSS
MBP1
MBP2
DMUTE
LED5
LED4
LED3
LED2
LED1
N.C
R923 1K
R921 1K
R922 1K
R920 1K
R919 1K
R918 1K
R917 1K
R930 100
R931 100
R932 100
R933 100
R972 1K
R974 1K
R975 1K
R976 1K
R968 1K
R969 1K
R977 1K
R924 1K


CN803
PGND
P7.5V
VSS
CHGCONT1
CHGCONT2
CHSW4
CHSW2
CHSW3
CHSW1
N.C
N.C
N.C
N.C
CHSW5
TO LOADING MOTOR CIRCUIT (CN1) (PAGE 43)
CN804
RESTSW
N.C
/CDRESET
STATUS
DMUTE
SUBQ
SQCLK
BLKCLK
/TLOCK
/FLOCK
SENSE
MLD
MDATA
MCLK
PGND
CD7.5V
N.C
LDSW
DGND
CD 5V
CD R
AGND
CDL
TO SERVO CIRCUIT (CN702) (PAGE 33)
CP804
CD 7.5V
N.C
DECK1
+B
DECK2
N.C
REC
N.C
PGND
CD 5V
N.C
N.C
N.C
14V
SP LATACH
P7.5V
SP DATA
N.C
COM CLK
IO DATA
TO MAIN CIRCUIT (CP303) (PAGE 36)
Q906
Q907
Q908
Q906,Q907
2SC2785FTA
SWITCHING (BEAT PROOF)
Q908
BA1L4TA
RESET CONTROL
D907
1SS291TA
D908
RVD1SS133TA
D910
RVD1SS133TA
D911
MTZJ6R8BTA
X901
X902
CP803
N.C
CD LCH
CD GND
CD RCH
/HALT
PCONT
DC DET
SYS 6V
DGND
DGND
DGND
DO
STEREO
SD
PLL CLK
PLL DATA
PLLCE
FL2
VP
FL1
TO MAIN CIRCUIT (CP304) (PAGE 36)

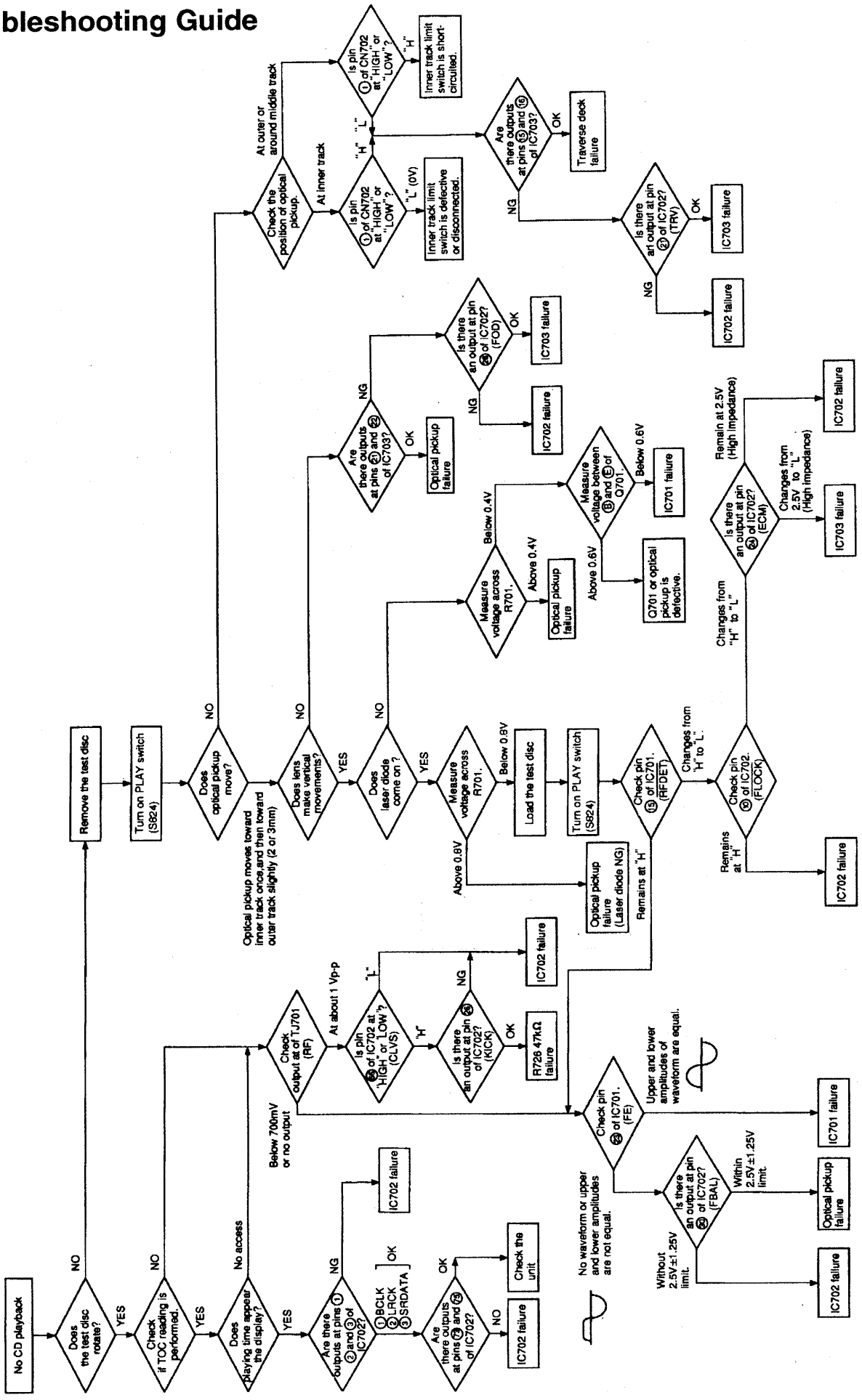

K POWER CIRCUIT
IC501
RSN35H1
POWER AMP
JK501
(Lch)
SPEAKER OUT
(Rch)
H506B
H506A
CN504
AMP-R
AMP-L
GND
SP-R
SP-L
TO OPERATION CCT (H807) (PAGE 38)
CN503
AGND
P11V
DCDET
+14V
R CH
AGND
L CH
-14V
DCDET
CDGND
SPGND
DGND
Q503
Q506
Q505
Q503,Q506
2SC2785FTA
PROTECTOR
Q505
2SD1762E
REGULATOR
E501
CN502
TUNGND
MGND
MOGND
N.C
SUB+B
PCONT
AC
N.C
AC
FL1
FL2
FL1
Q502
2SD1762E
REGULATOR
Q504
Q507
2SB1357ETA
REGULATOR
2SA933SSTA
SWITCHING
Q501
2SC2785FTA
RELAY DRIVE
RLY501
D507 RVDMTZ12BTA
T501
POWER TRANSFORMER
F1
125V 2A
JK500
AC IN
120V
60Hz
H501
CP501
L TRANSFORMER CIRCUIT

C DECK CIRCUIT




DETECTING
SWITCH (1) CIRCUIT
DETECTING
SWITCH (2) CIRCUIT
S5
DISC NUMBER DET
S3
UP POSITION DET
S2
PLAY POSITION DET
W1
W2
DNT
GND
GND
SW3
SW2
GND
CN1
DNT
N.C
N.C
N.C
N.C
SW1
SW3
SW2
SW4
REV
FWD
VSS
VCC
GND
E
TO
PANEL
CIRUIT
(CN803)
(PAGE 40)
S1
STOCKER POSITION DET
S4
TRAY OPEN DET
IC1
DIRECTION
SELECT
DRIVE
IC1
BA6418N
MOTOR DRIVE
((3.8V))
((0V))
((3.8V))
((0V))
((0V))
((7.3V))
((0V))
((0V))
((0V))
M
C1
10V82
J LOADING MOTOR CIRCUIT

■ Troubleshooting Guide



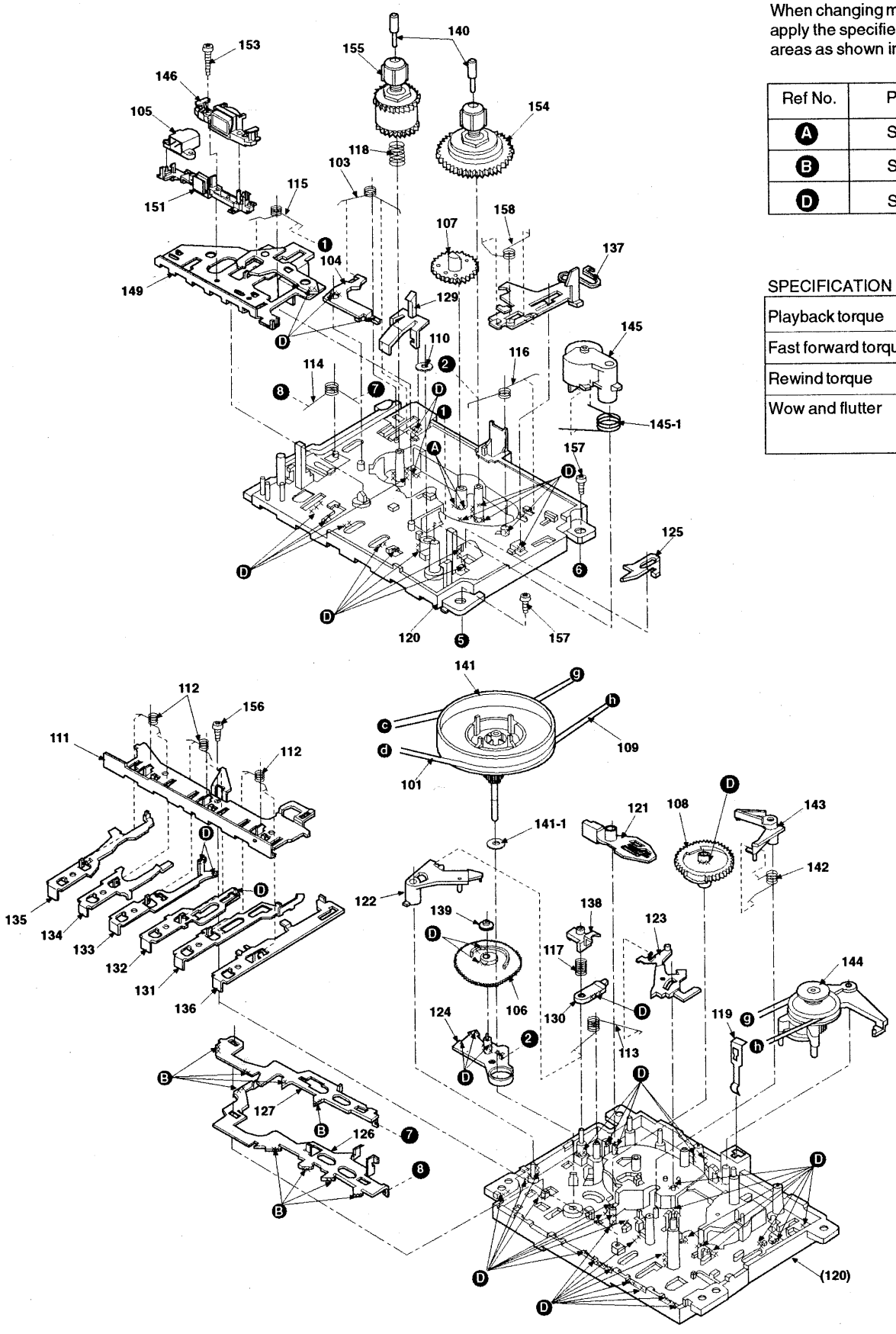
■ Mechanism Parts List

Note : **[M]** mark in Remarks column indicates parts that are supplied by **MESA**.

Ref No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK 1	
101	RDV0007	MAIN BELT	[M]
103	RMB0109-1	BRAKE SPRING	[M]
104	RML0116	BRAKE ANGLE	[M]
105	RBR2CG002-S	E HEAD	[M]
106	RDG0057	IDLER GEAR	[M]
107	RDG0059	FF RELAY GEAR	[M]
108	RDK0005	CAM GEAR	[M]
109	RDV0006-1	RF BELT	[M]
110	RHW16009	CAPSTAN WASHER	[M]
111	RMA0109	BACK PLATE	[M]
112	RMB0043-1	RODOPERATIONSPRING	[M]
113	RMB0045	AS SPRING	[M]
114	RMB0046-1	LOCK PLATE SPRING	[M]
115	RMB0165	HEAD PANEL SPRING	[M]
116	RMB0048	IDLER LEVER SPRING	[M]
117	RMB0053	PAUSE LEVER SPRING	[M]
118	RMB0125	BACK TENSION SPRING	[M]
119	RMC0061	SPRING	[M]
120	RFKRCT090P-K	CHASSIS ASS'Y	[M]
121	RML0071	SWAY LEVER	[M]
122	RML0072	AS RELEASE LEVER	[M]
123	RML0073-1	AS PROTECT LEVER	[M]
124	RML0074	IDLER LEVER	[M]
125	RML0076	EJECTSELECTIONLEVER	[M]
126	RML0077	LOCK PLATE	[M]
127	RML0078	FUNCTION PLATE	[M]
129	RML0081-1	LEVER	[M]
130	RML0082	PAUSE LEVER	[M]
131	RMM0023	PLAY ROD	[M]
132	RMM0024	REW ROD	[M]
133	RMM0025	FF ROD	[M]
134	RMM0026	STOP ROD	[M]
135	RMM0027	PAUSE ROD	[M]
136	RMM0028	REC ROD	[M]
137	RMM0029	EJECT SLIDE LEVER	[M]
138	RMR0211	PAUSE BUSH	[M]
139	RMR0227	IDLER GEAR BUSH	[M]
140	RMS0055	REEL SHAFT	[M]
141	RXF0012	FLYWHEEL ASS'Y	[M]
141-1	RHW21008	WASHER	[M]
142	RMB0044	TRIGGER SPRING	[M]
143	RML0075	TRIGGER LEVER	[M]
144	RXP0014	RF CLUTCH ASS'Y	[M]
145	RXP0015	PINCH ROLLER ASS'Y	[M]
145-1	RMB0049	PINCH ARM SPRING	[M]
146	RFKRXDT30PK	R/P HEAD	[M]
149	RFKRACH46GCK	HEAD PANEL ASS'Y	[M]
151	RMQ0383	HEAD BASE (DECK 1)	[M]
153	XTN2+14F	SCREW	[M]
154	RXR0004	TAKE UP REEL ASS'Y	[M]
155	RXR0005	SUPPLY REEL ASS'Y	[M]
156	XTN2+6J	SCREW	
157	XTW26+6L	SCREW	
158	RME0098-2	SPRING	[M]
		CASSETTE DECK 2	
201	RDV0009	MAIN BELT B	[M]
203	RMB0109-1	BRAKE SPRING	[M]
204	RML0116	BRAKE	[M]
206	RDG0057	IDLER GEAR	[M]
207	RDG0059	FF RELAY GEAR	[M]
208	RDK0005	CAM GEAR	[M]
209	RDV0006-1	RF BELT	[M]
210	RHW16009	CAPSTAN WASHER	[M]
211	RMA0109	BACK PLATE	[M]
212	RMB0043-1	RODOPERATIONSPRING	[M]
213	RMB0045	AS SPRING	[M]
214	RMB0046-1	LOCK PLATE SPRING	[M]
215	RMB0165	HEAD PANEL SPRING	[M]
216	RMB0048	IDLER LEVER SPRING	[M]
217	RMB0053	PAUSE LEVER SPRING	[M]
218	RMB0125	BACK TENSION SPRING	[M]
219	RMC0061	SPRING	[M]
220	RFKRCT090P-K	CHASSIS ASS'Y	[M]
221	RML0071	SWAY LEVER	[M]
222	RML0072	AS RELEASE LEVER	[M]
223	RML0073-1	AS PROTECT LEVER	[M]
224	RML0074	IDLER LEVER	[M]
225	RML0076	EJECTSELECTIONLEVER	[M]
226	RML0077	LOCK PLATE	[M]
227	RML0078	FUNCTION PLATE	[M]
230	RML0082	PAUSE LEVER	[M]
231	RMM0023	PLAY ROD	[M]
232	RMM0024	REW ROD	[M]
233	RMM0025	FF ROD	[M]
234	RMM0026	STOP ROD	[M]
235	RMM0027	PAUSE ROD	[M]
237	RMM0029	EJECT SLIDE LEVER	[M]
238	RMR0211	PAUSE BUSH	[M]
239	RMR0227	IDLER GEAR BUSH	[M]
240	RMS0055	REEL SHAFT	[M]
241	RXF0012	FLYWHEEL ASS'Y	[M]
241-1	RHW21008	WASHER	[M]
242	RMB0044	TRIGGER SPRING	[M]
243	RML0075	TRIGGER LEVER	[M]
244	RXP0014	RF CLUTCH ASSY	[M]
245	RXP0015	PINCH ROLLER ASSY	[M]
245-1	RMB0049	PINCH ARM SPRING	[M]
246	RFKRXDT30PK	R/P HEAD	[M]
249	RMA0696	HEAD PANEL	[M]
251	RMQ0384	HEAD BASE (DECK 2)	[M]
253	XTN2+14F	SCREW	[M]
254	RXR0004	TAKE UP REEL ASS'Y	[M]
255	RXR0005	SUPPLY REEL ASS'Y	[M]
256	XTN2+6J	SCREW	
257	XTW26+6L	SCREW	
258	RME0098-2	SPRING	[M]
260	RFKPXDT610PK	DC MOTOR ASS'Y	[M]
261	RHD26002	SCREW	
262	RMA0122	ANGLE	[M]
263	RMG0102	RUBBER SPACE	[M]
264	RMG0131	RUBBER SPACE	[M]
265	RMA0121	ANGLE	[M]
266	RML0085	LEVER	[M]

■ Mechanism Parts Location (RAA0910)

DECK 1 (For recording and playback)



Note:
When changing mechanism parts, apply the specified arrow indicated areas as shown in the drawing.

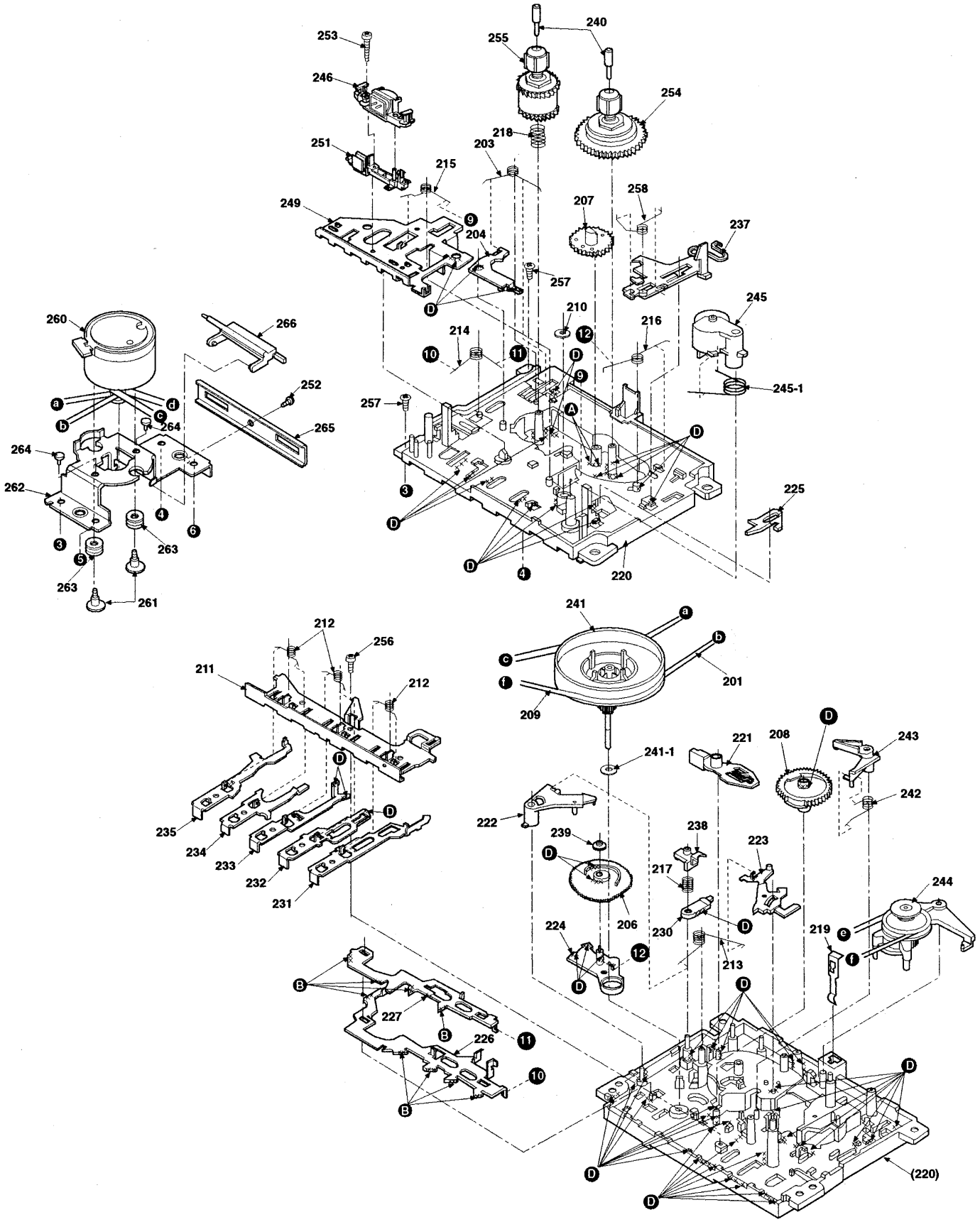
Ref No.	Part Name
Ⓐ	SZZ0L25
Ⓑ	SZZ0L06
Ⓓ	SZZ0L30

SPECIFICATION

Playback torque	25~50 g.m
Fast forward torque	65~130 g.m
Rewind torque	65~130 g.m
Wow and flutter	Less than 0.25%(WRMS)

■ Mechanism Parts Location (RAA0910)

DECK 2 (For playback only)

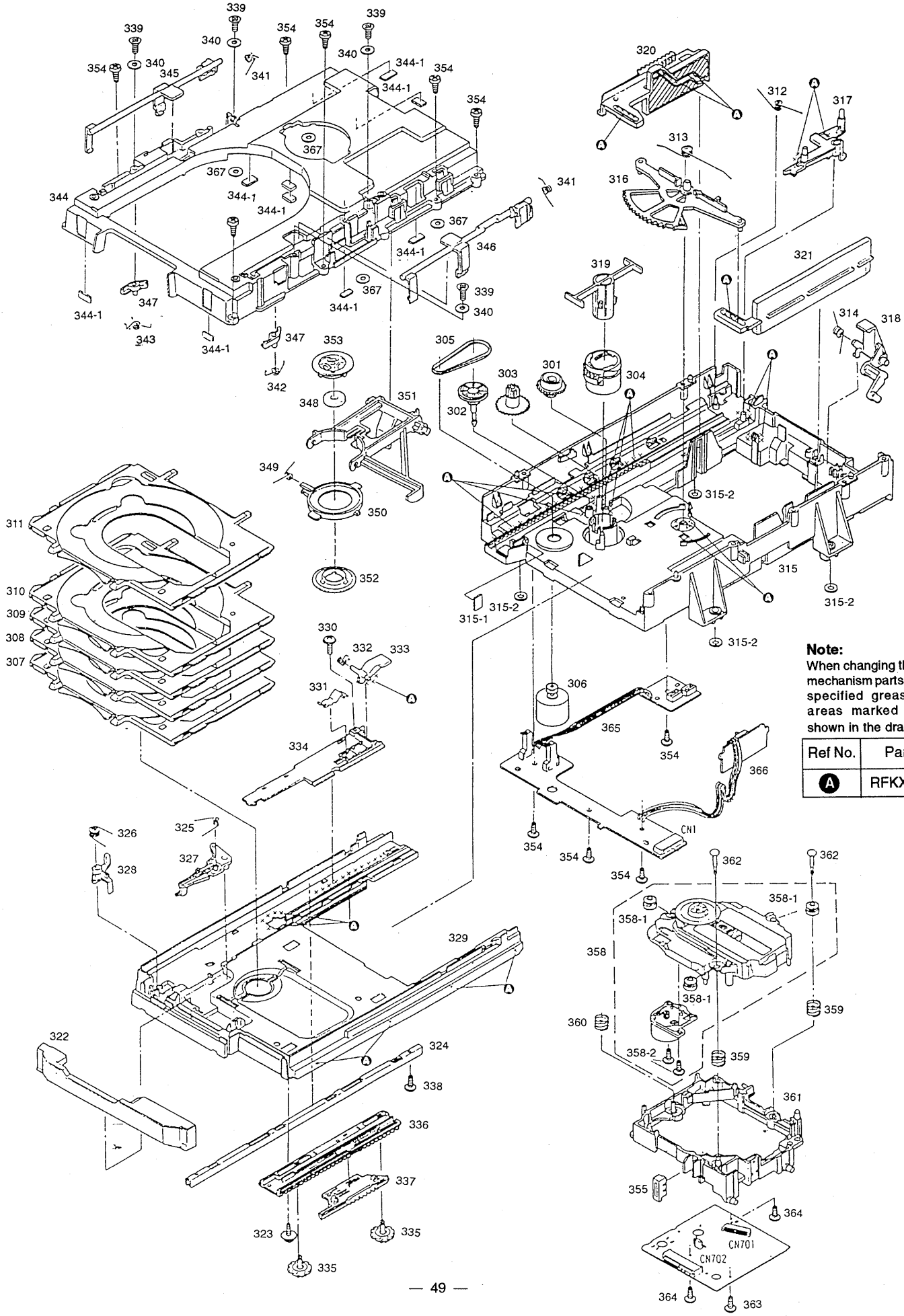


■ CD Loading Unit Parts List

Note : **[M]** mark in Remarks column indicates parts that are supplied by **MESA**.

Ref No.	Part No.	Part Name & Description	Remarks
		LOADING MECHANISM	
301	RDG0309	RELAY GEAR	[M]
302	RDG0310	PULLEY GEAR	[M]
303	RDG0311	DRIVE GEAR	[M]
304	RDG0313	UP/DOWN GEAR LEVER	
305	RDV0036	BELT	[M]
306	RFKPDS790PK1	MOTOR ASS'Y	[M]
307	RGQ0170-K	TRAY 1	[M]
308	RGQ0171-K	TRAY 2	[M]
309	RGQ0172-K	TRAY 3	[M]
310	RGQ0173-K	TRAY 4	
311	RGQ0174-K	TRAY 5	
312	RME0170	LOCK LEVER SPRING	[M]
313	RME0179	ASSIST SPRING	[M]
314	RME0180	TRAY HOLDER SPRING	
315	RFKNACH430GC	MECHA BASE ASS'Y	
315-1	RMF0221	FELT	
315-2	RMG0402-K	RUBBER WASHER	
316	RML0379	CHANGE LEVER	[M]
317	RML0380	LOCK LEVER	[M]
318	RML0383	TRAY HOLDING LEVER	
319	RML0385	UP/DOWN LEVER	
320	RMM0139	SLIDE PLATE LEVER (1	
321	RMM0141	SLIDE PLATE LEVER (2	
322	RGQ0175-K	TRAY ORNAMENT	
323	RHD20010	SCREW DRIVE RACK	[M]
324	RMA0868	SUPPORT ANGLE	[M]
325	RME0171	BASE LOCK LEVER SP.	
326	RME0172	CARRIER LOCK LEVER SP.	
327	RML0377	BASE LOCK LEVER	
328	RML0378	CARRIER LOCK LEVER	
329	RMR0884-K	TRAY BASE	
330	RHD20009-1	SCREW CARRIER	
331	RMC0274	TRAY FOOK SPRING	[M]
332	RME0173	CARRIER ARM SPRING	
333	RML0376-1	CARRIER ARM	
334	RMM0137	CARRIER LEVER	
335	RDG0312	SPEED UP GEAR	[M]
336	RMM0134	DRIVE RACK	[M]
337	RMM0135	CUSHION RACK	[M]
338	XTN2+6F	SCREW SUPPORT ANGLE	[M]
339	XTS3+8J	SCREW	
340	XWE4E10	CUSHION	
341	RME0178	HOLDING SPRING	
342	RME0181	UP PREVENTION SP (R)	[M]
343	RME0182	UP PREVENTION SP (L)	[M]
344	RFKNACH430GD	MECHA COVER ASS'Y	
344-1	RMF0221	FELT	
345	RML0381	HOLDING CATCH (1)	
346	RML0382	HOLDING CATCH (2)	
347	RML0384	UP PREVENTION LEVER	[M]
348	RHM245ZA	MAGNET	[M]
349	RME0174	CLAMP BASE SPRING	
350	RFKNACH430GE	CLAMP BASE ASS'Y	
351	RML0388-1	CLAMP LEVER	
352	RMR0761-W	MAGNET HOLDER LEVER	
353	RMR0899-K	FIXED PLATE	
354	XTB3+10JFZ	SCREW PB, LID	
355	RMR0975-W	TRV CAP	
358	RAE0150Z	TRAVERSE UNIT	
358-1	SHGD113-1	FLOATING RUBBER	
358-2	SNSD38	SCREW	
359	RME0109	FLOATING SPRING (1)	
360	RME0142	FLOATING SPRING (2)	
361	RMK0293	TRAVERSE CHASSIS	[M]
362	RMS0123-1	FIXED PIN	
363	XTN2+6G	SCREW	
364	XTV2+6G	SCREW	
365	REZ0792	3P WIRE KIT	
366	REZ0793	3P WIRE KIT	
367	RMG0430-Q	RUBBER TUBE	

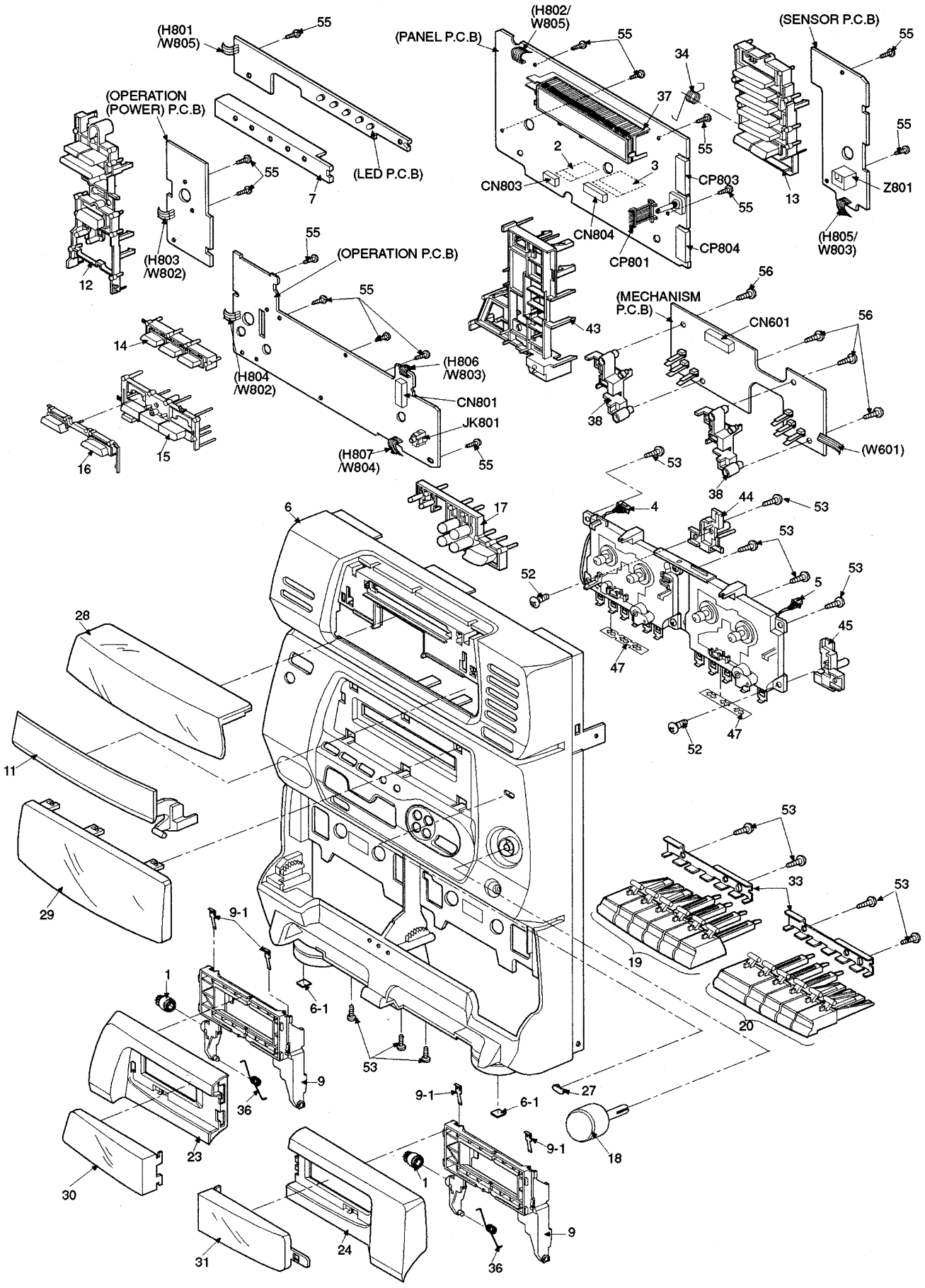
■ CD Loading Unit Parts Location



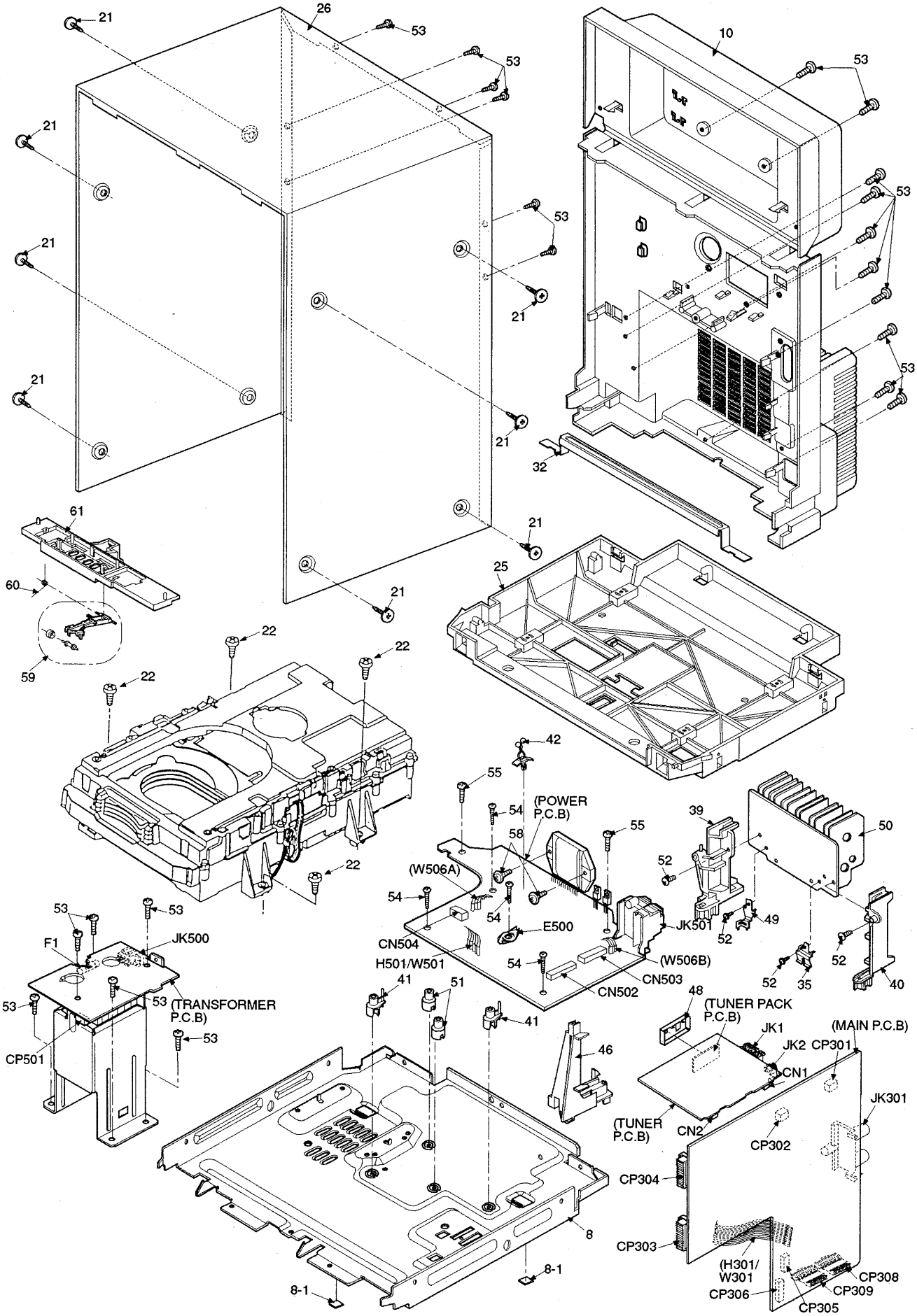
Note:
When changing the loading mechanism parts, apply the specified grease to the areas marked "xxx" as shown in the drawing.

Ref No.	Part No.
Ⓐ	RFKXPG671

■ Cabinet Parts Location



■ Cabinet Parts Location



■ Replacement Parts List

Notes:
- Important safety notice :
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
  When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
- The parenthesized indications in the Remarks column specify the areas. (refer to the cover page for area.)
  Parts without these indications can be used for all areas.
- [M] indicates in Remarks column parts that are supplied by **MESA**.
- The "(SF)" mark denotes the standard part.
- Remote Control Unit : Supply period for three years from terminal of production.
- **Warning:** This product uses a laser diode. Refer to caution statements on page 2.

Ref No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RDG5874ZB	DAMPER GEAR	[M]
2	REE0657	14P FFC	
3	REE0658	23P FFC	
4	REXX0120	SHIELD WIRE (REC)	[M]
5	REXX0121	SHIELD WIRE (PLAY)	[M]
6	RFKGACH34PK	FRONT PANEL ASS'Y	[M]
6-1	RKA0059-K	LEG RUBBER	[M]
7	RFKNACH430GB	5-LED REFLECTOR ASSY	
8	RFKJACH430GK	BOTTOM CHASSIS ASS'Y	
8-1	RKA0059-K	LEG RUBBER	[M]
9	RFKLACH34PK	CASS. HOLDER ASS'Y	[M]
9-1	RUS757ZAA	CASS. HALF SPRING	[M]
10	RFKHACH34PCK	REAR PANEL ASS'Y	[M](PC)
10	RKFX0043-K	REAR PANEL	[M](P)
11	RGK0767A-K	CHANGER LID	[M]
12	RGU1303A-K	POWER BUTTON	[M]
13	RGU1304A-K	DISK BUTTON	[M]
14	RGU1307-K	FUNCTION BUTTON	[M]
15	RGUX0139-K	CONTROL BUTTON 1	[M]
16	RGUX0140-K	CONTROL BUTTON 2	[M]
17	RGUX0141-K	EQ BUTTON	[M]
18	RGW0238-K	MAIN VOLUME KNOB	[M]
19	RGZX0021A-K	MECHA BUTTON (L)	[M]
20	RGZX0021B-K	MECHA BUTTON (R)	[M]
21	RHD30007	CABINET SCREW	
22	RHD30048	CD MECHANISM SCREW	[M]
23	RKFX0048-K	CASSETTE LID (L)	[M]
24	RKFX0049-K	CASSETTE LID (R)	[M]
25	RKM0309-K	CHANGER CHASSIS	[M]
26	RKM0310-K	TOP CABINET	[M]
27	RKW0414-Q	SENSOR WINDOW	[M]
28	RKW0415-Q	CHANGER WINDOW	[M]
29	RKW0416B-Q	FL WINDOW	[M]
30	RKWX0076-Q	CASSETTE LID WIN (L)	[M]
31	RKWX0077-Q	CASSETTE LID WIN (R)	[M]
32	RMA0938	REAR SUPPORT ANGLE	[M]
33	RMAX0006	ANGLE PLATE	[M]
34	RMB0447	CD LID SPRING	[M]
35	RMC0158-S	TR FIXTURE	[M]
36	RMEX0002	CASS. OPEN SPRING	[M]
37	RMNX0011	FL HOLDER	[M]
38	RMR0368	PCB CHASSIS	[M]
39	RMR0653-K	HEAT SINK SUPPORT (L)	[M]
40	RMR0654-K	HEAT SINK SUPPORT (R)	[M]
41	RMR0741-X	PCB SUPPORT (PIN)	[M]
42	RMR0824-W	WIRE CLAMPER	
43	RMR0908-X	PANEL PCB SUPPORT	[M]
44	RMRX0007	MECHA SUPPORT (L)	[M]
45	RMRX0008	MECHA SUPPORT (R)	[M]
46	RMRX0022	MAIN PCB HOLDER	[M]
47	RMXX0004	MECHA SPACER	[M]
48	RSC0027	SHIELD COVER	
49	RSC0362	EARTH TERMINAL	[M]
50	RXXX0005	HEAT SINK UNIT	[M]
51	SHE187-4	PCB SUPPORT (NO PIN)	[M]
52	XTB3+10J	SCREW	
53	XTB3+10JFZ	REAR PANEL SCREW	
54	XTB3+20J	POWER PCB SCREW	
55	XTBS26+10J	PANEL PCB SCREW	
56	XTN2+14GF	MECHANISM PCB SCREW	[M]
58	XTW3+15T	POWER IC SCREW	
59	RFKNACH34PK	HOLDER ARM ASS'Y	[M]
60	RME0221	HOLDER ARM SPRING	[M]
61	RMN0350	8 LED HOLDER	[M]
		INTEGRATED CIRCUITS	
IC1	LA1832A	IC, IF/MPX	
IC2	LC7218	IC, PLL	
IC301	BU4052BCF-E2	IC, ANALOG SW	
IC302	BU2090F-E2	IC, IO EXPANDER	[M]
IC303	BH3854AFS-E2	IC, SOUND PROCESSOR	[M]
IC306	AN7345K	IC, REC PLAYBACK	[M]
IC308	BA7755A	IC, SWITCH	
IC309	BA4558FDXE2	IC, OP AMP	[M]
IC310	AN78M05	IC, 5V REGLILATOR	
IC501	RSN35H1	IC, HIC	⚠
IC901	M38197MA133	IC, MICRO PROCESSOR	[M]
		TRANSISTORS	
Q1	2SK544F-AC	TRANSISTOR	
Q2	2SC2786MTA	TRANSISTOR	
Q3	2SC2787FL1TA	TRANSISTOR	
Q4	2SC2787FL1TA	TRANSISTOR	
Q6	2SC2787LTA	TRANSISTOR	
Q7	RVTDTA143XST	TRANSISTOR	
Q10	2SC2785FETA	TRANSISTOR	
Q11	2SC2785FETA	TRANSISTOR	
Q101	2SJ40CDTA	TRANSISTOR	
Q102	2SJ40CDTA	TRANSISTOR	
Q103	BA1L4ZTA	TRANSISTOR	[M]
Q104	2SC1740SRTA	TRANSISTOR	
Q105	2SK301QTA	TRANSISTOR	[M]
Q106	2SC2785FTA	TRANSISTOR	
Q107	2SD1450STA	TRANSISTOR	
Q201	2SJ40CDTA	TRANSISTOR	
Q202	2SJ40CDTA	TRANSISTOR	
Q203	BA1L4ZTA	TRANSISTOR	[M]
Q204	2SC1740SRTA	TRANSISTOR	
Q205	2SK301QTA	TRANSISTOR	[M]
Q206	2SC2785FTA	TRANSISTOR	
Q207	2SD1450STA	TRANSISTOR	
Q301	BA1F4MTA	TRANSISTOR	[M]
Q302	BA1F4MTA	TRANSISTOR	[M]
Q303	2SC2001L1TA	TRANSISTOR	
Q304	2SC2001L1TA	TRANSISTOR	
Q305	2SC2001L1TA	TRANSISTOR	
Q306	2SC1685RTA	TRANSISTOR	[M]
Q308	2SC2785FTA	TRANSISTOR	
Q309	2SC1740SRTA	TRANSISTOR	
Q310	BN1A4MTA	TRANSISTOR	[M]
Q311	BN1A4MTA	TRANSISTOR	[M]
Q312	2SB1185E	TRANSISTOR	⚠
Q313	BA1F4MTA	TRANSISTOR	[M]

Ref No.	Part No.	Part Name & Description	Remarks
Q314	2SD2037ETA	TRANSISTOR	[M] ⚠
Q315	2SC2001KTA	TRANSISTOR	⚠
Q316	BA1L3ZTA	TRANSISTOR	[M]
Q317	BN1L3NTA	TRANSISTOR	[M]
Q318	2SC2785FTA	TRANSISTOR	
Q319	2SC2001KTA	TRANSISTOR	⚠
Q321	2SC2784FTA	TRANSISTOR	[M]
Q322	2SC2001KTA	TRANSISTOR	⚠
Q323	BA1F4MTA	TRANSISTOR	[M]
Q324	BA1F4MTA	TRANSISTOR	[M]
Q330	2SD2037ETA	TRANSISTOR	[M] ⚠
Q331	2SD2037ETA	TRANSISTOR	[M] ⚠
Q501	2SC2785FTA	TRANSISTOR	
Q502	2SD1762E	TRANSISTOR	[M] ⚠
Q503	2SC2785FTA	TRANSISTOR	
Q504	2SA933SSTA	TRANSISTOR	
Q505	2SD1762E	TRANSISTOR	[M] ⚠
Q506	2SC2785FTA	TRANSISTOR	
Q507	2SB1357ETA	TRANSISTOR	[M] ⚠
Q601	2SK381CTA	TRANSISTOR	
Q602	BA1L4ZTA	TRANSISTOR	[M]
Q603	2SD965RTA	TRANSISTOR	
Q604	BN1L4MTA	TRANSISTOR	[M]
Q605	BA1L4ZTA	TRANSISTOR	[M]
Q606	BA1L4ZTA	TRANSISTOR	[M]
Q901	2SC2785FTA	TRANSISTOR	
Q902	2SC2785FTA	TRANSISTOR	
Q903	2SC2785FTA	TRANSISTOR	
Q904	2SC2785FTA	TRANSISTOR	
Q905	2SC2785FTA	TRANSISTOR	
Q906	2SC2785FTA	TRANSISTOR	
Q907	2SC2785FTA	TRANSISTOR	
Q908	BA1L4LTA	TRANSISTOR	[M]
		DIODES	
D1	SVC211SPA-AL	DIODE	
D2	SVC211SPA-AL	DIODE	
D3	SVC211SPA-AL	DIODE	
D4	MTZJ5R1CTA	DIODE	[M]
D5	RVD1SS133TA	DIODE	
D101	RVD1SS133TA	DIODE	
D201	RVD1SS133TA	DIODE	
D301	MTZJ8R2BTA	DIODE	[M]
D302	MTZJ8R2BTA	DIODE	[M] ⚠
D303	RVD1SS133TA	DIODE	
D304	RVD1SS133TA	DIODE	
D305	MA29WATA	DIODE	

Ref No.	Part No.	Part Name & Description	Remarks
D306	RVDMTZ4R7BTA	DIODE	
D307	RVD1SS133TA	DIODE	
D309	MTZJ8R2BTA	DIODE	[M] ⚠
D310	RVD1SS133TA	DIODE	
D311	RVD1SS133TA	DIODE	
D312	RVD1SS133TA	DIODE	
D313	1D3E	DIODE	[M]
D314	1D3E	DIODE	[M]
D315	1D3E	DIODE	[M]
D316	RVDMTZ10BTA	DIODE	
D317	RVDMTZ10BTA	DIODE	
D318	RVDMTZ10BTA	DIODE	
D319	RVD1SS133TA	DIODE	
D320	MTZJ6R2CTA	DIODE	⚠
D321	RVDMTZ5R6BTA	DIODE	⚠
D322	RVD1SS133TA	DIODE	
D323	RVD1SS133TA	DIODE	
D390	RVD1SS133TA	DIODE	
D398	RVDMTZ13BTA	DIODE	⚠
D501	1D3E	DIODE	[M]
D502	1D3E	DIODE	[M]
D503	1N5402BM21	DIODE	⚠
D504	1N5402BM21	DIODE	⚠
D505	1N5402BM21	DIODE	⚠
D506	1N5402BM21	DIODE	⚠
D507	MTZJ12BTA	DIODE	
D508	RVD1SR35TR	DIODE	
D509	RVD1SR35TR	DIODE	
D516	MTZJ15CTA	DIODE	
D517	MTZJ15BTA	DIODE	[M]
D518	RVDMTZ11BTA	DIODE	⚠
D601	RVD1SS133TA	DIODE	
D602	RVD1SS133TA	DIODE	
D901	SLR505DCT31	DIODE	[M]
D902	SLR505DCT31	DIODE	[M]
D903	SLR505DCT31	DIODE	[M]
D904	SLR505DCT31	DIODE	[M]
D905	SLR505DCT31	DIODE	[M]
D907	1SS291TA	DIODE	
D908	RVD1SS133TA	DIODE	
D909	RVD1SS133TA	DIODE	
D910	RVD1SS133TA	DIODE	
D911	MTZJ6R8BTA	DIODE	
		VARIABLE RESISTORS	
VR601	EVNDXAA00B24	VR, HI SPEED	
VR801	RRV16B24104B	VR, VOLUME	

Ref No.	Part No.	Part Name & Description	Remarks
		SWITCHES	
S601	RSH1A004-1	SW, PLAY (DECK1)	[M]
S602	RSH1A004-1	SW, F/R (DECK1)	[M]
S603	RSH1A004-1	SW, REC (DECK1)	[M]
S604	RSH1A004-1	SW, PLAY (DECK 2)	[M]
S605	RSH1A004-1	SW, F/R (DECK 2)	[M]
S606	RSH1A013-2I	SW, MOTOR (DECK 1)	[M]
S607	RSH1A013-2I	SW, MOTOR (DECK 2)	[M]
S801	EVQ21405R	SW, POWER	
S802	EVQ21405R	SW, TIMER	
S803	EVQ21405R	SW, EASY EDIT	
S804	EVQ21405R	SW, RANDOM	
S805	EVQ21405R	SW, REPEAT	
S807	EVQ21405R	SW, STOP	
S808	EVQ21405R	SW, AUX	
S809	EVQ21405R	SW, TUNER/BAND	
S810	EVQ21405R	SW, CD	
S811	EVQ21405R	SW, TAPE	
S812	EVQ21405R	SW, REV	
S813	EVQ21405R	SW, FWD	
S814	EVQ21405R	SW, PLAY FWD	
S815	EVQ21405R	SW, PAUSE	
S817	EVQ21405R	SW, TIMER/CLOCK	
S818	EVQ21405R	SW, SOFT	
S819	EVQ21405R	SW, HEAVY	
S820	EVQ21405R	SW, CLEAR	
S821	EVQ21405R	SW, FLAT	
S822	EVQ21405R	SW, V. BASS	
S823	EVQ21405R	SW, TAPE EDIT	
S824	EVQ21405R	SW, CD OPEN/CLOSE	
S825	EVQ21405R	SW, CD DISC CHECK	
S826	EVQ21405R	SW, DISC 5	
S827	EVQ21405R	SW, DISC 4	
S828	EVQ21405R	SW, DISC 3	
S829	EVQ21405R	SW, DISC 2	
S830	EVQ21405R	SW, DISC 1	
		CONNECTORS	
CN1	RJU063W07T	7P CONNECTOR	
CN2	RJU063W07T	7P CONNECTOR	
CN502	RJU005A012	12P CONNECTOR SOC	
CN503	RJU005A012	12P CONNECTOR SOC	
CN504	RJS1A5205	5P CONNECTOR	[M]
CN601	RJS10T6ZA	10 CONNECTOR	[M]
CN801	RJU071H09M	9PIN B-B CONNECTOR	
CN803	RJS1A6214-1	14P FFC CONNECTOR	

Ref No.	Part No.	Part Name & Description	Remarks
CN804	RJS1A6223-1	23PIN FFC CONNECTOR	
CP301	RJT063W07T	7 PIN B-B CONNECTOR	
CP302	RJT063W07T	7 PIN B-B CONNECTOR	
CP303	RJU077K20	20P B-B CONNECTOR	[M]
CP304	RJU077K20	20P B-B CONNECTOR	[M]
CP305	RJP4G18ZA	4 PIN CONNECTOR	
CP306	RJP7G18ZA	7 PIN CONNECTOR	
CP308	RJT005W012	12 PIN B-B CONNECTOR	
CP309	RJT005W012	12 PIN B-B CONNECTOR	
CP501	RJP6G18ZA	SOCKET	
CP801	RJT071H09A	9P B-B CONNECTOR	
CP803	RJT077K20	20P B-B CONNECTOR	[M]
CP804	RJT077K20	20P B-B CONNECTOR	[M]
		COILS & TRANSFORMERS	
L1	RLQZP1R2KT-Y	AXIAL COIL	
L2	RLQZPR47KT-Y	COIL	
L3	RLQZPR47KT-Y	COIL	
L4	ELEPKR68MA	RF CHOKE COIL	
L5	ELEPKR68MA	RF CHOKE COIL	
L8	RLQZP1R0KT-Y	AXIAL COIL	
L301	RLQZB470KT-D	INDUCTOR	
L601	RLQY10S3-0	COIL	
L901	RLQZP3R3KT-Y	COIL	
L902	RLQZP3R3KT-Y	COIL	
T301	RL08C004-T	BIAS OSC COIL	[M]
T501	RTP1M3C010-X	POWER TRANSFORMER	[M] ⚠
		COMPONENT COMBINATION	
Z1	RLA2Z002M-T	AM ANT. COIL	
Z2	RLI2Z006M-T	AM IFT	
Z801	RCDHC-278N	SENSOR	
		CERAMIC FILTERS	
CF1	RLFFETWNA01L	FM CF	
CF2	RLFFETWNA01L	FM CF	
		OSCILLATORS	
X1	RSXZ456KM01	19KHZ OSC	
X2	RLFDFT12DD	FM RESONANTOR	
X3	SVQ49U722T-S	7.2 MHz X'TAL	
X901	EF0EN6004T4	6 MHZ CRYSTAL OSC	[M]
X902	RSXD32K7S02	32KHZ CRYSTAL OSC	[M]

Ref No.	Part No.	Part Name & Description	Remarks
		DISPLAY TUBE	
FL801	RSL0217-F	FL DISPLAY	[M]
		EARTH TERMINAL	
E500	SNE1004-2	EARTH TERMINAL	
		RELAY	
RLY501	RSY0017-0	CD CHANGER RELAY	[M] ⚠
		FUSES	
F1	XBA1C20NBAL	FUSE	[M] ⚠
		FUSE CLIPS	
FC1	SJT388	FUSE CLIP	
FC2	SJT388	FUSE CLIP	
		JACKS	
JK1	RJH5302	JK, ANTENNA TERMINAL	[M]
JK2	SJS208	JK, AM LOOP ANT TER.	
JK301	RJH3209N	JK, LINE-IN	[M]
JK500	SJSD16	JK, AC INLET	⚠
JK501	RJR0054	JK, SP TERMINAL	
JK801	RJJ37TK04-C	JK, HEAD PHONE	
		WIRE	
W501	REXX0125	5P WIRE (POWER)	[M]
		PACKING MATERIALS	
P1	RPF0100	MIRAMAT SHEET	[M]
P2	RPGX0239	GIFT BOX	[M](P)
P2	RPGX0240	GIFT BOX	[M](PC)
P3	RPNX0051	POLYFOAM	[M]
P4	SPSD152	ACCESSORY CASE	
P5	XZB24X33C04	VINYL BAG	
		ACCESSORIES	
A1	EUR643805	REMOTE CONTROL	[M]
A1-1	UR64EC1638-1	R. C. BATTERY COVER	[M]
A2	RFKSACH34PCK	INST. MANUAL ASS'Y	[M](PC)

Ref No.	Part No.	Part Name & Description	Remarks
A2	RQT3302-P	INSTRUCTION MANUAL	[M](P)
A3	RSA0006	FM ANTENNA	
A4	RSA0010	AM LOOP ANT	
A5	SJA172	AC CORD	(SF) ⚠
		<LOADING MOTOR>	
		INTEGRATED CIRCUIT	
IC1	BA6418N	IC, MOTOR DRIVER	
		SWITCHES	
S1	RSH1A005	SW, LEAF	
S2	RSH1A032-U	SW, MECHA	
S3	RSH1A032-U	SW, MECHA	
S4	RSH1A005	SW, LEAF	
S5	RSH1A032-U	SW, MECHA	
		CONNECTOR	
CN1	RJS1A6714	CONNECTOR 14P	
		<SERVO P.C.B.>	
		INTEGRATED CIRCUITS	
IC701	AN8835SBE1	IC, SERVO AMP.	
IC702	MN662741RPA	IC, DIGITAL LSI	
IC703	AN8389SE1	IC, COIL/MOTOR DRIVE	
		TRANSISTOR	
Q701	2SB709S	TRANSISTOR	
		SWITCH	
S701	RSM0006-P	SW, RESET	
		CONNECTORS	
CN701	RJU035T016-1	16 PIN FFC CONNECTOR	
CN702	RJS1A6723-1Q	23 PIN FFC CONNECTOR	
		OSCILLATOR	
X701	RSXZ16M9M01T	CERAMIC OSC	

■ Resistors & Capacitors

Notes : • Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors),etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
• [M] indicates in Remarks column parts that are supplied by **MESA**.
• Capacitor values are in microfarad (μF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
• Resistors values are in ohms, unless specified otherwise, 1k=1,000(OHM), 1M=1,000k(OHM)

Ref No.	Part No.	Values & Remarks
	RESISTORS	
R1	ERDS2TJ104T	100K 1/4W
R2	ERDS2TJ104T	100K 1/4W
R3	ERDS2TJ221T	220 1/4W
R4	ERDS2TJ104T	100K 1/4W
R5	ERDS2TJ564T	560K 1/4W
R6	ERDS2TJ391T	390 1/4W
R7	ERDS2TJ272T	2.7K 1/4W
R8	ERDS2TJ684T	680K 1/4W
R9	ERDS2TJ391T	390 1/4W
R10	ERDS2TJ391T	390 1/4W
R11	ERDS2TJ684T	680K 1/4W
R15	ERDS2TJ181T	180 1/4W
R16	ERDS2TJ102T	1K 1/4W
R17	ERDS2TJ331T	330 1/4W
R18	ERDS2TJ471T	470 1/4W
R19	ERDS2TJ224T	220K 1/4W
R20	ERDS2TJ562T	5.6K 1/4W
R21	ERDS2TJ822T	8.2K 1/4W
R22	ERDS2TJ473T	47K 1/4W
R23	ERDS2TJ332T	3.3K 1/4W
R24	ERDS2TJ472T	4.7K 1/4W
R25	ERDS2TJ271T	270 1/4W
R26	ERDS2TJ471T	470 1/4W
R27	ERDS2TJ272T	2.7K 1/4W
R28	ERDS2TJ473T	47K 1/4W
R29	ERDS2TJ680T	68 1/4W
R41	ERDS2TJ102T	1K 1/4W
R42	ERDS2TJ102T	1K 1/4W
R45	ERDS2TJ102T	1K 1/4W
R46	ERDS2TJ104T	100K 1/4W
R47	ERDS2TJ562T	5.6K 1/4W
R48	ERDS2TJ391T	390 1/4W
R49	ERDS2TJ561T	560 1/4W
R50	ERDS2TJ102T	1K 1/4W
R51	ERDS2TJ103T	10K 1/4W
R52	ERDS2TJ102T	1K 1/4W
R53	ERDS2TJ102T	1K 1/4W
R54	ERDS2TJ102T	1K 1/4W
R55	ERDS2TJ102T	1K 1/4W
R56	ERDS2TJ102T	1K 1/4W
R57	ERDS2TJ103T	10K 1/4W
R58	ERDS2TJ103T	10K 1/4W
R60	ERDS2TJ563T	56K 1/4W
R61	ERDS2TJ102T	1K 1/4W
R63	ERDS2TJ102T	1K 1/4W
R64	ERDS2TJ820T	82 1/4W
R65	ERDS2TJ103T	10K 1/4W
R101	ERDS2TJ473T	47K 1/4W
R102	ERDS2TJ103T	10K 1/4W
R103	ERDS2TJ473T	47K 1/4W
R104	ERDS2TJ103T	10K 1/4W
R105	ERDS2TJ103T	10K 1/4W
R106	ERDS2TJ682T	6.8K 1/4W
R111	ERDS2TJ183T	18K 1/4W
R113	ERDS2TJ822T	8.2K 1/4W
R114	ERDS2TJ472T	4.7K 1/4W
R115	ERDS2TJ561T	560 1/4W
R116	ERDS2TJ820T	82 1/4W
R117	ERDS2TJ181T	180 1/4W
R118	ERDS2TJ102T	1K 1/4W
R119	ERDS2TJ223T	22K 1/4W
R120	ERDS2TJ562T	5.6K 1/4W
R121	ERDS2TJ223T	22K 1/4W
R122	ERDS2TJ121T	120 1/4W
R123	ERDS2TJ823T	82K 1/4W
R125	ERDS2TJ392T	3.9K 1/4W
R126	ERDS2TJ104T	100K 1/4W
R127	ERDS2TJ182T	1.8K 1/4W
R128	ERDS2TJ472T	4.7K 1/4W
R129	ERDS2TJ152T	1.5K 1/4W
R132	ERDS2TJ471T	470 1/4W
R134	ERDS2TJ623T	62K 1/4W
R135	ERDS2TJ103T	10K 1/4W
R138	ERDS2TJ222T	2.2K 1/4W
R145	ERDS2TJ104T	100K 1/4W
R191	ERDS2TJ822T	8.2K 1/4W
R199	ERDS2TJ103T	10K 1/4W
R201	ERDS2TJ473T	47K 1/4W
R202	ERDS2TJ103T	10K 1/4W
R203	ERDS2TJ473T	47K 1/4W
R204	ERDS2TJ103T	10K 1/4W
R205	ERDS2TJ103T	10K 1/4W
R206	ERDS2TJ682T	6.8K 1/4W
R211	ERDS2TJ183T	18K 1/4W
R213	ERDS2TJ822T	8.2K 1/4W
R214	ERDS2TJ472T	4.7K 1/4W
R215	ERDS2TJ561T	560 1/4W
R216	ERDS2TJ820T	82 1/4W
R217	ERDS2TJ181T	180 1/4W
R218	ERDS2TJ102T	1K 1/4W
R219	ERDS2TJ223T	22K 1/4W
R220	ERDS2TJ562T	5.6K 1/4W
R221	ERDS2TJ223T	22K 1/4W
R222	ERDS2TJ121T	120 1/4W
R223	ERDS2TJ823T	82K 1/4W
R225	ERDS2TJ392T	3.9K 1/4W
R226	ERDS2TJ104T	100K 1/4W
R227	ERDS2TJ182T	1.8K 1/4W
R228	ERDS2TJ472T	4.7K 1/4W
R229	ERDS2TJ152T	1.5K 1/4W
R232	ERDS2TJ471T	470 1/4W
R234	ERDS2TJ623T	62K 1/4W
R235	ERDS2TJ103T	10K 1/4W
R238	ERDS2TJ222T	2.2K 1/4W
R245	ERDS2TJ104T	100K 1/4W
R291	ERDS2TJ822T	8.2K 1/4W
R299	ERDS2TJ103T	10K 1/4W
R303	ERDS2TJ472T	4.7K 1/4W
R304	ERDS2TJ103T	10K 1/4W
R305	ERDS2TJ103T	10K 1/4W
R306	ERDS2TJ393T	39K 1/4W
R307	ERDS2TJ122T	1.2K 1/4W
R308	ERDS2TJ222T	2.2K 1/4W
R309	ERDS2TJ222T	2.2K 1/4W
R310	ERDS2TJ102T	1K 1/4W
R311	ERDS2TJ332T	3.3K 1/4W
R312	ERDS2TJ152T	1.5K 1/4W
R313	ERDS2TJ334T	330K 1/4W
R314	ERDS2TJ334T	330K 1/4W
R315	ERDS2TJ223T	22K 1/4W
R316	ERDS2TJ103T	10K 1/4W
R318	ERDS2TJ221T	220 1/4W
R320	ERDS2TJ562T	5.6K 1/4W
R321	ERDS2TJ103T	10K 1/4W
R322	ERDS2TJ225T	2.2M 1/4W
R323	ERDS2TJ103T	10K 1/4W
R324	ERDS2TJ334T	330K 1/4W
R325	ERDS2TJ334T	330K 1/4W
R328	ERD25FVJ4R7T	4.7 1/4W
R329	ERDS2TJ472T	4.7K 1/4W
R330	ERDS2TJ472T	4.7K 1/4W
R331	ERDS2TJ102T	1K 1/4W
R332	ERDS2TJ272T	2.7K 1/4W
R333	ERDS2TJ332T	3.3K 1/4W
R334	ERDS2TJ103T	10K 1/4W
R335	ERDS2TJ472T	4.7K 1/4W
R336	ERDS2TJ103T	10K 1/4W
R337	ERDS2TJ472T	4.7K 1/4W
R338	ERDS2TJ102T	1K 1/4W
R340	ERDS2TJ472T	4.7K 1/4W
R341	ERDS2TJ272T	2.7K 1/4W
R342	ERDS2TJ392T	3.9K 1/4W
R343	ERDS2TJ151T	150 1/4W
R344	ERDS2TJ105T	1M 1/4W
R345	ERDS2TJ474T	470K 1/4W
R346	ERDS2TJ473T	47K 1/4W
R348	ERDS2TJ105T	1M 1/4W
R349	ERDS2TJ223T	22K 1/4W
R350	ERDS2TJ334T	330K 1/4W
R351	ERDS2TJ223T	22K 1/4W
R352	ERDS2TJ331T	330 1/4W
R353	ERDS2TJ103T	10K 1/4W
R354	ERDS2TJ151T	150 1/4W
R355	ERDS1FVJ100T	10 1/2W ⚠
R356	ERDS1FVJ100T	10 1/2W ⚠
R357	ERDS1FVJ100T	10 1/2W ⚠
R358	ERDS2TJ560T	56 1/4W
R359	ERDS2TJ821T	820 1/4W
R360	ERD25FVJ180T	18 1/4W
R361	ERD25FVJ180T	18 1/4W
R362	ERD25FVJ180T	18 1/4W
R363	ERDS2TJ333T	33K 1/4W
R364	ERDS2TJ183T	18K 1/4W
R366	ERDS2TJ102T	1K 1/4W
R367	ERDS2TJ183T	18K 1/4W
R368	ERDS2TJ472T	4.7K 1/4W

Ref No.	Part No.	Values & Remarks
R369	ERDS1FVJ2R2T	2.2 1/2W ⚠
R370	ERDS1FVJ331T	330 1/2W ⚠
R371	ERDS2TJ181T	180 1/4W
R372	ERDS2TJ182T	1.8K 1/4W
R373	ERDS2TJ153T	15K 1/4W
R374	ERDS2TJ102T	1K 1/4W
R377	ERDS2TJ101T	100 1/4W
R380	ERDS2TJ222T	2.2K 1/4W
R381	ERDS2TJ1R0T	1 1/4W
R382	ERD25FVJ180T	18 1/4W
R383	ERDS2TJ331T	330 1/4W
R384	ERDS1FVJ100T	10 1/2W ⚠
R385	ERDS2TJ333T	33K 1/4W
R386	ERDS2TJ393T	39K 1/4W
R387	ERDS2TJ272T	2.7K 1/4W
R388	ERDS2TJ102T	1K 1/4W
R389	ERDS2TJ103T	10K 1/4W
R390	ERDS2TJ1R2T	1.2 1/4W
R391	ERDS2TJ1R2T	1.2 1/4W
R393	ERDS2TJ122T	1.2K 1/4W
R394	ERDS2TJ222T	2.2K 1/4W
R395	ERDS2TJ152T	1.5K 1/4W
R397	ERDS2TJ332T	3.3K 1/4W
R398	ERDS2TJ223T	22K 1/4W
R399	ERDS1FVJ220T	22 1/2W ⚠
R401	ERDS2TJ103T	10K 1/4W
R500	ERDS1TJ335	3.3M 1/2W ⚠
R501	ERDS2TJ822T	8.2K 1/4W
R502	ERDS2TJ822T	8.2K 1/4W
R503	ERDS2TJ153T	15K 1/4W
R504	ERDS2TJ153T	15K 1/4W
R505	ERDS2TJ682T	6.8K 1/4W
R506	ERDS2TJ682T	6.8K 1/4W
R507	ERDS2TJ683T	68K 1/4W
R508	ERDS2TJ683T	68K 1/4W
R509	ERDS1FVJ100T	10 1/2W ⚠
R510	ERDS1FVJ100T	10 1/2W ⚠
R511	ERDS2TJ823T	82K 1/4W
R512	ERDS2TJ124T	120K 1/4W
R513	ERDS2TJ334T	330K 1/4W
R514	ERDS2TJ563T	56K 1/4W
R515	ERDS2TJ103T	10K 1/4W
R516	ERD25FVJ470T	47 1/4W
R517	ERDS2TJ563T	56K 1/4W
R518	ERDS1FVJ101T	100 1/2W ⚠
R519	ERDS1FVJ101T	100 1/2W ⚠
R520	ERG1SJ100E	10 1W ⚠
R521	ERDS1FVJ152T	1.5K 1/2W ⚠

Ref No.	Part No.	Values & Remarks
R522	ERDS1FVJ1R0T	1 1/2W ⚠
R524	ERDS1FVJ560T	56 1/2W ⚠
R525	ERDS1FVJ560T	56 1/2W ⚠
R526	ERDS1FVJ560T	56 1/2W ⚠
R527	ERDS2TJ152T	1.5K 1/4W
R528	ERDS2TJ151T	150 1/4W
R529	ERG1SJ100E	10 1W ⚠
R530	ERDS2TJ331T	330 1/4W
R531	ERDS2TJ151T	150 1/4W
R532	ERDS2TJ682T	6.8K 1/4W
R533	ERDS2TJ472T	4.7K 1/4W
R536	ERDS1FVJ1R0T	1 1/2W ⚠
R537	ERDS2TJ151T	150 1/4W
R539	ERDS1FVJ101T	100 1/2W ⚠
R544	ERDS2TJ151T	150 1/4W
R550	ERX1ANJP5R6	5.6 1W ⚠
R601	ERDS2TJ153T	15K 1/4W
R602	ERDS2TJ273T	27K 1/4W
R603	ERDS2TJ273T	27K 1/4W
R605	ERDS2TJ2R7T	2.7 1/4W
R606	ERDS2TJ221T	220 1/4W
R607	ERDS2TJ103T	10K 1/4W
R608	ERDS2TJ153T	15K 1/4W
R609	ERDS2TJ103T	10K 1/4W
R610	ERDS2TJ103T	10K 1/4W
R611	ERDS2TJ102T	1K 1/4W
R612	ERDS2TJ473T	47K 1/4W
R613	ERDS2TJ473T	47K 1/4W
R614	ERDS2TJ103T	10K 1/4W
R615	ERDS2TJ153T	15K 1/4W
R616	ERDS2TJ103T	10K 1/4W
R617	ERDS2TJ103T	10K 1/4W
R618	ERDS2TJ102T	1K 1/4W
R619	ERDS2TJ473T	47K 1/4W
R620	ERDS2TJ105T	1M 1/4W
R623	ERDS2TJ393T	39K 1/4W
R811	ERDS2TJ102T	1K 1/4W
R812	ERDS2TJ102T	1K 1/4W
R813	ERDS2TJ122T	1.2K 1/4W
R814	ERDS2TJ182T	1.8K 1/4W
R815	ERDS2TJ222T	2.2K 1/4W
R821	ERDS2TJ102T	1K 1/4W
R822	ERDS2TJ102T	1K 1/4W
R823	ERDS2TJ122T	1.2K 1/4W
R824	ERDS2TJ182T	1.8K 1/4W
R825	ERDS2TJ222T	2.2K 1/4W
R826	ERDS2TJ272T	2.7K 1/4W
R827	ERDS2TJ472T	4.7K 1/4W

Ref No.	Part No.	Values & Remarks
R829	ERDS2TJ272T	2.7K 1/4W
R831	ERDS2TJ102T	1K 1/4W
R832	ERDS2TJ102T	1K 1/4W
R833	ERDS2TJ122T	1.2K 1/4W
R834	ERDS2TJ182T	1.8K 1/4W
R835	ERDS2TJ222T	2.2K 1/4W
R836	ERDS2TJ272T	2.7K 1/4W
R837	ERDS2TJ472T	4.7K 1/4W
R841	ERDS2TJ102T	1K 1/4W
R842	ERDS2TJ102T	1K 1/4W
R843	ERDS2TJ122T	1.2K 1/4W
R844	ERDS2TJ182T	1.8K 1/4W
R845	ERDS2TJ222T	2.2K 1/4W
R846	ERDS2TJ272T	2.7K 1/4W
R901	ERDS2TJ563T	56K 1/4W
R902	ERDS2TJ223T	22K 1/4W
R903	ERDS2TJ334T	330K 1/4W
R905	ERDS2TJ472T	4.7K 1/4W
R907	ERDS2TJ681T	680 1/4W
R908	ERDS2TJ472T	4.7K 1/4W
R909	ERDS2TJ106T	10M 1/4W
R910	ERDS2TJ102T	1K 1/4W
R911	ERDS2TJ102T	1K 1/4W
R912	ERDS2TJ101T	100 1/4W
R913	ERDS2TJ101T	100 1/4W
R914	ERDS2TJ103T	10K 1/4W
R916	ERDS2TJ473T	47K 1/4W
R917	ERDS2TJ102T	1K 1/4W
R918	ERDS2TJ102T	1K 1/4W
R919	ERDS2TJ102T	1K 1/4W
R920	ERDS2TJ102T	1K 1/4W
R921	ERDS2TJ102T	1K 1/4W
R922	ERDS2TJ102T	1K 1/4W
R923	ERDS2TJ102T	1K 1/4W
R924	ERDS2TJ102T	1K 1/4W
R925	ERDS2TJ103T	10K 1/4W
R926	ERDS2TJ103T	10K 1/4W
R927	ERDS2TJ104T	100K 1/4W
R928	ERDS2TJ561T	560 1/4W
R929	ERDS2TJ104T	100K 1/4W
R930	ERDS2TJ101T	100 1/4W
R931	ERDS2TJ101T	100 1/4W
R932	ERDS2TJ101T	100 1/4W
R933	ERDS2TJ101T	100 1/4W
R934	ERDS2TJ103T	10K 1/4W
R935	ERDS2TJ103T	10K 1/4W
R936	ERDS2TJ103T	10K 1/4W
R937	ERDS2TJ103T	10K 1/4W

Ref No.	Part No.	Values & Remarks
R938	ERDS2TJ223T	22K 1/4W
R939	ERDS2TJ223T	22K 1/4W
R940	ERDS2TJ103T	10K 1/4W
R941	ERDS2TJ103T	10K 1/4W
R942	ERDS2TJ103T	10K 1/4W
R944	ERDS2TJ472T	4.7K 1/4W
R945	ERDS2TJ472T	4.7K 1/4W
R946	ERDS2TJ472T	4.7K 1/4W
R947	ERDS2TJ472T	4.7K 1/4W
R948	ERDS2TJ472T	4.7K 1/4W
R949	ERDS2TJ104T	100K 1/4W
R950	ERDS2TJ104T	100K 1/4W
R951	ERDS2TJ104T	100K 1/4W
R965	ERDS2TJ471T	470 1/4W
R966	ERDS2TJ473T	47K 1/4W
R967	ERDS2TJ473T	47K 1/4W
R968	ERDS2TJ102T	1K 1/4W
R969	ERDS2TJ102T	1K 1/4W
R972	ERDS2TJ102T	1K 1/4W
R974	ERDS2TJ102T	1K 1/4W
R975	ERDS2TJ102T	1K 1/4W
R976	ERDS2TJ102T	1K 1/4W
R977	ERDS2TJ102T	1K 1/4W
R978	ERDS2TJ123T	12K 1/4W
R979	ERDS2TJ223T	22K 1/4W
R980	ERDS2TJ123T	12K 1/4W
R981	ERDS2TJ223T	22K 1/4W
R982	ERDS2TJ820T	82 1/4W
R983	ERDS2TJ820T	82 1/4W
R984	ERDS2TJ820T	82 1/4W
R985	ERDS2TJ820T	82 1/4W
R986	ERDS2TJ820T	82 1/4W
R987	ERDS2TJ820T	82 1/4W
R988	ERDS2TJ820T	82 1/4W
R989	ERDS2TJ820T	82 1/4W
R995	ERDS2TJ821T	820 1/4W
R996	ERDS2TJ821T	820 1/4W
R997	ERDS2TJ821T	820 1/4W
R998	ERDS2TJ821T	820 1/4W
R999	ERDS2TJ821T	820 1/4W
	CAPACITORS	
C1	ECBT1H5R6KC5	5.6P 50V
C2	RCBS1H102KBY	1000P 50V
C3	ECBT1H2R2KC5	2.2P 50V
C4	ECBT1H181KB5	180P 50V
C5	ECBT1H5R6KC5	5.6P 50V

Ref No.	Part No.	Values & Remarks
C6	ECBT1H3R3KC5	3.3P 50V
C7	ECBT1H4R7KC5	4.7P 50V
C8	ECBT1H3R3KC5	3.3P 50V
C9	ECBT1H2R2KC5	2.2P 50V
C10	ECBT1H180JC5	18P 50V
C11	RCBS1H102KBY	1000P 50V
C15	ECBT1C103MS5	0.01 16V
C16	ECEA1CU220B	22 16V
C17	ECBT1C103MS5	0.01 16V
C18	ECBT1H102KB5	1000P 50V
C19	ECBT1C103MS5	0.01 16V
C20	ECEA1HKA3R3B	3.3 50V
C21	ECEA0JU101B	100 6.3V
C22	ECBT1C103MS5	0.01 16V
C23	ECEA1CU220B	22 16V
C24	ECBT1H473ZF5	0.047 50V
C25	ECEA1HKA4R7B	4.7 50V
C26	ECBT1C822MS5	8200P 16V
C27	ECQP2A821JZT	820P 100V
C28	ECEA1HKA010B	1 50V
C29	ECFR1C273KR	0.027 16V
C30	ECFR1C273KR	0.027 16V
C31	ECBT1H150JC5	15P 50V
C32	ECBT1C103MS5	0.01 16V
C33	ECEA1HKA2R2B	2.2 50V
C34	ECEA1HKA010B	1 50V
C35	ECEA1HKA010B	1 50V
C45	ECEA1EKA4R7B	4.7 25V
C46	ECEA1EKA4R7B	4.7 25V
C47	ECBT1H473ZF5	0.047 50V
C48	ECBT1H8R2KC5	8.2P 50V
C51	ECBT1C103MS5	0.01 16V
C52	ECEA25M4R7RB	4.7 25V
C53	ECBT1C103MS5	0.01 16V
C54	ECBT1H180JC5	18P 50V
C55	ECBT1H150JC5	15P 50V
C56	ECBT1H102KB5	1000P 50V
C57	ECEA0JU101B	100 6.3V
C59	ECBT1H330J5	33P 50V
C60	ECBT1H102KB5	1000P 50V
C61	ECBT1H331KB5	330P 50V
C62	ECEA1CU220B	22 16V
C63	ECBT1C103MS5	0.01 16V
C64	ECBT1C103MS5	0.01 16V
C65	ECBT1H102KB5	1000P 50V
C66	ECBT1H102KB5	1000P 50V
C67	ECBT1H102KB5	1000P 50V
C71	ECBT1H331KB5	330P 50V

Ref No.	Part No.	Values & Remarks
C102	ECBT1H101KB5	100P 50V
C103	ECBT1H102KB5	1000P 50V
C104	ECEA1EU100B	10 25V
C105	ECEA1HU100B	10 50V
C106	ECFR1C104KR	0.1 16V
C107	ECFR1C563KR	0.056 16V
C108	ECBT1C103MS5	0.01 16V
C109	ECEA1EU4R7B	4.7 25V
C111	ECBT1H331KB5	330P 50V
C112	ECBT1H331KB5	330P 50V
C113	ECEA0JU101B	100 6.3V
C114	ECFR1C183KR	0.018 16V
C115	ECEA1HU010B	1 50V
C116	ECFR1C223MR	0.022 16V
C117	ECEA0JU101B	100 6.3V
C119	ECBT1C332MR5	3300P 16V
C120	ECBT1H221KB5	220P 50V
C121	ECBT1H102KB5	1000P 50V
C122	ECEA1HU4R7B	4.7 50V
C123	ECBT1H821KB5	820P 50V
C124	ECBT1H102KB5	1000P 50V
C125	ECBT1C472MR5	4700P 16V
C127	ECBT1H270J5	27P 50V
C128	ECBT1H101KB5	100P 50V
C130	ECEA1HU220B	22 50V
C131	ECEA1HUR68	0.68 50V
C132	ECBT1H101KB5	100P 50V
C133	ECEA1HUR33B	0.33 50V
C191	ECBT0J153MS5	0.015 6.3V
C202	ECBT1H101KB5	100P 50V
C203	ECBT1H102KB5	1000P 50V
C204	ECEA1EU100B	10 25V
C205	ECEA1HU100B	10 50V
C206	ECFR1C104KR	0.1 16V
C207	ECFR1C563KR	0.056 16V
C208	ECBT1C103MS5	0.01 16V
C209	ECEA1EU4R7B	4.7 25V
C211	ECBT1H331KB5	330P 50V
C212	ECBT1H331KB5	330P 50V
C213	ECEA0JU101B	100 6.3V
C214	ECFR1C183KR	0.018 16V
C215	ECEA1HU010B	1 50V
C216	ECFR1C223MR	0.022 16V
C217	ECEA0JU101B	100 6.3V
C219	ECBT1C332MR5	3300P 16V
C220	ECBT1H221KB5	220P 50V
C221	ECBT1H102KB5	1000P 50V
C222	ECEA1HU4R7B	4.7 50V

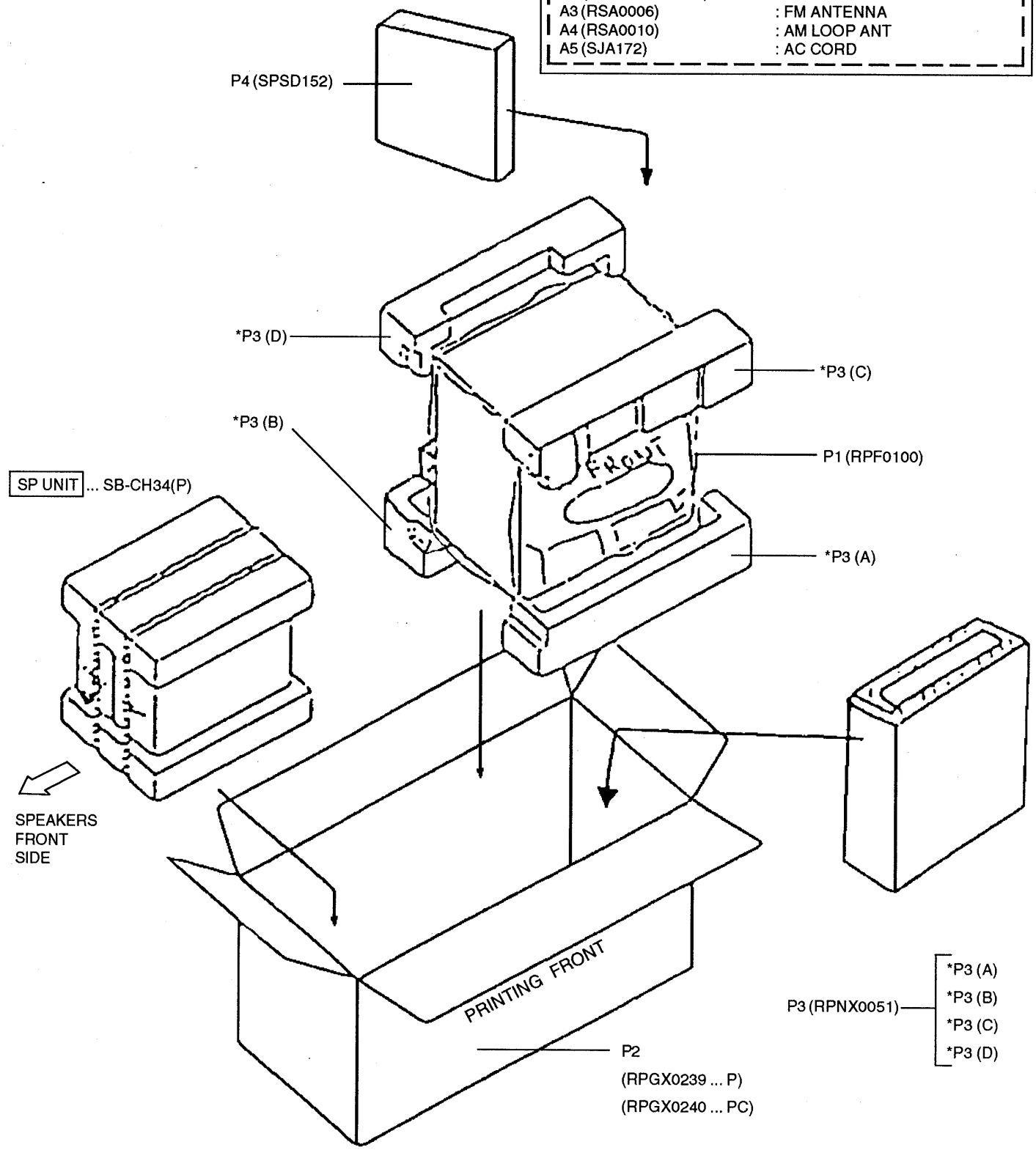
Ref No.	Part No.	Values & Remarks
C223	ECBT1H821KB5	820P 50V
C224	ECBT1H102KB5	1000P 50V
C225	ECBT1C472MR5	4700P 16V
C227	ECBT1H270J5	27P 50V
C228	ECBT1H101KB5	100P 50V
C230	ECEA1HU220B	22 50V
C231	ECEA1HUR68	0.68 50V
C232	ECBT1H101KB5	100P 50V
C233	ECEA1HUR33B	0.33 50V
C291	ECBT0J153MS5	0.015 6.3V
C301	ECBT1C103MS5	0.01 16V
C302	ECBT1C103MS5	0.01 16V
C303	ECBT1C103MS5	0.01 16V
C304	ECBT1C103MS5	0.01 16V
C305	ECBT1H101KB5	100P 50V
C306	ECBT1H101KB5	100P 50V
C307	ECBT1H101KB5	100P 50V
C308	ECEA1CU100B	10 16V
C309	ECEA1AU471B	470 10V
C310	ECEA1HUR22B	0.22 50V
C311	ECEA1CKA100B	10 16V
C312	ECEA1CKA220B	22 16V
C313	ECEA1CKA100B	10 16V
C314	ECBT1H221KB5	220P 50V
C315	ECBT1H221KB5	220P 50V
C316	ECEA1CU100B	10 16V
C318	ECEA1HU220B	22 50V
C319	ECEA1AU220B	22 10V
C320	ECFR1C393KR	0.039 16V
C321	ECEA1CU330B	33 16V
C322	ECEA1CU100B	10 16V
C323	ECBT1C103MS5	0.01 16V
C324	ECEA1CU101B	100 16V
C325	ECQV1H473JZ3	0.047 50V
C326	ECBT1H102KB5	1000P 50V
C327	ECBT1H102KB5	1000P 50V
C328	ECBT1C103MS5	0.01 16V
C329	ECBT1C103MS5	0.01 16V
C330	ECBT1C103MS5	0.01 16V
C331	ECQP2A622JZT	6200P 100V[M]
C332	ECQV1H474JZ3	0.47 50V
C333	ECEA1HU010B	1 50V
C334	ECEA1HU010B	1 50V
C335	ECBT1H102KB5	1000P 50V
C336	ECBT1C103MS5	0.01 16V
C339	ECEA1CKA100B	10 16V
C340	ECEA1HU010B	1 50V
C341	ECBT1C103MS5	0.01 16V

Ref No.	Part No.	Values & Remarks
C342	ECEA1HU010B	1 50V
C343	ECEA1CU470B	47 16V
C344	ECKR1H103ZF5	0.01 50V
C345	ECEA1HU010B	1 50V
C346	ECKR1H103ZF5	0.01 50V
C347	ECEA1CU330B	33 16V
C348	ECKR1H103ZF5	0.01 50V
C349	ECEA1CU330B	33 16V
C350	ECEA1HU4R7B	4.7 50V
C351	ECEA1CU221B	220 16V
C352	ECKR1H103ZF5	0.01 50V
C353	ECEA1HU3R3B	3.3 50V
C354	ECEA1HU330B	33 50V
C355	ECKR1H103ZF5	0.01 50V
C356	ECKR1H103ZF5	0.01 50V
C357	ECEA1VU101B	100 10V
C358	ECKR1H103ZF5	0.01 50V
C359	ECEA1AU470B	47 10V
C362	ECEA1HU010B	1 50V
C363	ECKR1H103ZF5	0.01 50V
C370	ECEA1EU101B	100 25V
C374	ECBT1H104ZF5	0.1 50V
C375	ECFR1C103KR	0.01 16V
C376	ECBT1E103ZF5	0.01 25V
C377	ECBT1H104ZF5	0.1 50V
C378	ECBT1H104ZF5	0.1 50V
C379	ECBT1H104ZF5	0.1 50V
C381	ECEA1CU470B	47 16V
C382	ECEA1HU100B	10 50V
C383	ECBT1E103ZF5	0.01 25V
C396	ECBT1H104ZF5	0.1 50V
C397	ECEA0JU221B	220 6.3V
C398	ECFR1C103KR	0.01 16V
C399	ECEA1EU101B	100 25V
C501	ECEA1HKA3R3B	3.3 50V
C502	ECEA1HKA3R3B	3.3 50V
C503	ECBT1H102KB5	1000P 50V
C504	ECBT1H102KB5	1000P 50V
C505	ECBT1H331KB5	330P 50V
C506	ECBT1H331KB5	330P 50V
C507	ECBT1H150J5	15P 50V
C508	ECBT1H150J5	15P 50V
C509	ECEA1HKA010B	1 50V
C510	ECEA1HKA010B	1 50V
C511	ECEA1HU330B	33 50V
C512	ECEA1HU2R2B	2.2 50V
C513	ECKR1H223ZF5	0.022 50V
C514	ECKR1H223ZF5	0.022 50V

Ref No.	Part No.	Values & Remarks
C515	ECKR1H103ZF5	0.01 50V
C516	ECKR1H103ZF5	0.01 50V
C517	ECEA1VU222E	2200 10V
C518	ECKR1H103ZF5	0.01 50V
C519	ECKR1H103ZF5	0.01 50V
C520	ECKR1H103ZF5	0.01 50V
C521	ECKR1H103ZF5	0.01 50V
C522	ECEA1VU332E	3300 10V ⚠
C523	ECEA1VU222E	2200 10V ⚠
C524	ECEA0JU101B	100 6.3V
C528	ECEA1CU331B	330 16V
C529	ECBT1E103ZF5	0.01 25V
C536	ECEA1CU101B	100 16V
C537	ECBT1E103ZF5	0.01 25V
C538	ECEA1CKA470B	47 16V
C539	ECBT1E103ZF5	0.01 25V
C602	ECEA1CKA101B	100 16V
C604	ECBT1H104ZF5	0.1 50V
C850	ECBT1H102KB5	1000P 50V
C851	ECBT1H102KB5	1000P 50V
C901	ECBT1H561KB5	560P 50V
C902	ECBT1H561KB5	560P 50V
C904	ECBT1H102KB5	1000P 50V
C905	ECBT1C103MS5	0.01 16V
C906	ECEA1HKA100B	10 50V
C907	ECBT1C103MS5	0.01 16V
C909	ECEA1HKA100B	10 50V
C910	ECBT1H680J5	68P 50V
C911	ECBT1H680J5	68P 50V
C912	ECBT1H560J5	56P 50V
C913	ECBT1H560J5	56P 50V
C914	ECBT1H102KB5	1000P 50V
C915	ECBT1H102KB5	1000P 50V
C916	ECBT1H220J5	22P 50V
C917	ECBT1H180J5	18P 50V
C918	ECBT1H101KB5	100P 50V
C919	ECEA1HKA010B	1 50V
C920	ECEA1HKA010B	1 50V
C921	ECBT1H101KB5	100P 50V
C922	ECBT1H561KB5	560P 50V
C923	ECBT1H561KB5	560P 50V
C924	ECBT1H561KB5	560P 50V
C925	ECBT1H561KB5	560P 50V
C926	ECBT1H561KB5	560P 50V
C927	ECBT1H561KB5	560P 50V
C928	ECBT1H561KB5	560P 50V
C929	ECBT1C103MS5	0.01 16V
C930	ECEA1AKA101B	100 10V
C931	ECBT1H102KB5	1000P 50V
C932	ECEA0JU102B	1000 6.3V
C933	ECEA0JU102B	1000 6.3V
C934	ECBT1H102KB5	1000P 50V
C944	ECBT1H102KB5	1000P 50V
C945	ECBT1H102KB5	1000P 50V
C946	ECBT1H101KB5	100P 50V
C947	ECBT1H101KB5	100P 50V
C949	ECEA1AKA470B	47 10V
C950	ECBT1H331KB5	330P 50V
C951	ECBT1H331KB5	330P 50V
C952	ECEA1CU331B	330 16V
C953	ECBT1C103MS5	0.01 16V
C997	ECBT1C103MS5	0.01 16V
C998	ECBT1C103MS5	0.01 16V
C999	ECBT1C103MS5	0.01 16V
	<SERVO P.C.B.>	
	RESISTORS	
R701	ERJ6GEYJ4R7V	4.7 1/10W
R703	ERJ6GEYJ823	82K 1/10W
R704	ERJ6GEYJ102V	1K 1/10W
R705	ERJ6GEYJ103V	10K 1/10W
R706	ERJ6GEYJ102V	1K 1/10W
R707	ERJ6GEYJ474V	470K 1/10W
R708	ERJ6GEYJ154V	150K 1/10W
R709	ERJ6GEYJ683V	68K 1/10W
R711	ERJ6GEYJ154V	150K 1/10W
R712	ERJ6GEYJ221V	220 1/10W
R717	ERJ6GEYJ102V	1K 1/10W
R718	ERJ6GEYJ102V	1K 1/10W
R719	ERJ6GEYJ102V	1K 1/10W
R720	ERJ6GEYJ102V	1K 1/10W
R721	ERJ6GEYJ101V	100 1/10W
R722	ERJ6GEYJ563V	56K 1/10W
R723	ERJ6GEYJ182V	1.8K 1/10W
R724	ERJ6GEYJ333V	33K 1/10W
R725	ERJ6GEYJ472V	4.7K 1/10W
R726	ERJ6GEYJ473V	47K 1/10W
R727	ERJ6GEYJ822V	8.2K 1/10W
R728	ERJ6GEYJ103V	10K 1/10W
R731	ERJ6GEYJ822V	8.2K 1/10W
R734	ERJ6GEYJ101V	100 1/10W
R735	ERJ6GEYJ101V	100 1/10W
R736	ERJ6GEYJ101V	100 1/10W
R738	ERJ6GEYJ223V	22K 1/10W
R741	ERJ6GEYJ562V	5.6K 1/10W
R742	ERJ6GEYJ562V	5.6K 1/10W
R743	ERJ6GEYJ562V	5.6K 1/10W
R744	ERJ6GEYJ103V	10K 1/10W
R745	ERJ6GEYJ155V	1.5M 1/10W
R748	ERJ6GEYJ182V	1.8K 1/10W
R749	ERJ6GEYJ682V	6.8K 1/10W
R750	ERJ6GEYJ473V	47K 1/10W
R751	ERJ6GEYJ473V	47K 1/10W
R752	ERJ8GEYJ220V	22 1/8W
R770	ERJ6GEYJ155V	1.5M 1/10W
R771	ERJ6GEYJ155V	1.5M 1/10W
R772	ERJ6GEYJ273V	27K 1/10W
	CAPACITORS	
C701	ECEA0JKA330I	33 6.3V
C702	ECUZNE104MBN	0.1 25V
C703	ECEA0JKA101I	100 6.3V
C704	ECUZNE104MBN	0.1 25V
C705	ECUZNE104MBN	0.1 25V
C706	ECUV1H272KBN	2700P 50V
C707	ECUV1E273KBN	0.027 25V
C708	ECUV1H472KBN	4700P 50V
C709	ECUV1C473KBN	0.047 16V
C710	ECUV1H182KBN	1800P 50V
C711	ECUZNE104MBN	0.1 25V
C712	ECUZNE104MBN	0.1 25V
C713	ECUV1C104MBM	0.1 16V
C714	ECEA0JKA101I	100 6.3V
C716	ECUV1H561KBN	560P 50V
C717	ECUZNE104MBN	0.1 25V
C718	ECUV1C224KBN	0.22 16V
C721	ECUV1H150JCN	15P 50V
C722	ECUV1H150JCN	15P 50V
C723	ECEA1AKA221I	220 10V
C724	ECUV1C104MBM	0.1 16V
C725	ECUV1H102KBN	1000P 50V
C726	ECUV1H102KBN	1000P 50V
C727	ECEA1HPK010I	1 50V
C728	ECEA1HPK010I	1 50V
C730	ECUZNE104MBN	0.1 25V
C731	ECEA0JKA221I	220 6.3V
C732	ECEA0JKA221I	220 6.3V
C733	ECUZNE104MBN	0.1 25V
C734	ECEA1AKA221I	220 10V
C735	ECUZNE104MBN	0.1 25V
C736	ECUZNE104MBN	0.1 25V
C737	ECUZNE104MBN	0.1 25V
C738	ECUV1C154KBN	0.15 16V
C742	ECUV1E273KBN	0.027 25V
C743	ECUZNE104MBN	0.1 25V
C744	ECUV1E822KBN	8200P 25V
C745	ECUV1C473MBN	0.047 16V
C747	ECUV1H222KBN	2200P 50V
C748	ECUV1H471KBM	470P 50V
C749	ECUZNE104MBN	0.1 25V
C751	ECUZNE104MBN	0.1 25V
C752	ECUV1H152KBN	1500P 50V
C753	ECUV1H471KBM	470P 50V
C754	ECUV1H471KBN	470P 50V
	CHIP JUMPERS	
RJ701	ERJ8GEY0R00A	0 1/8W
RJ702	ERJ8GEY0R00A	0 1/8W
RJ703	ERJ8GEY0R00A	0 1/8W
RJ704	ERJ8GEY0R00A	0 1/8W
RJ707	ERJ8GEY0R00A	0 1/8W
RJ709	ERJ8GEY0R00A	0 1/8W
RJ714	ERJ8GEY0R00A	0 1/8W
RJ715	ERJ8GEY0R00A	0 1/8W
RJ716	ERJ8GEY0R00A	0 1/8W
RJ717	ERJ8GEY0R00A	0 1/8W
RJ721	ERJ8GEY0R00A	0 1/8W
RJ722	ERJ8GEY0R00A	0 1/8W
RJ723	ERJ8GEY0R00A	0 1/8W
RJ724	ERJ8GEY0R00A	0 1/8W
RJ725	ERJ8GEY0R00A	0 1/8W
RJ726	ERJ8GEY0R00A	0 1/8W
RJ727	ERJ8GEY0R00A	0 1/8W
RJ728	ERJ8GEY0R00A	0 1/8W
RJ729	ERJ8GEY0R00A	0 1/8W
RJ730	ERJ8GEY0R00A	0 1/8W
	TEST JUMPERS	
TJ701	EYF8CU	TEST JUMPER
TJ702	EYF8CU	TEST JUMPER
	<LOADING MOTOR>	
	CAPACITORS	
C1	ECA1AKF820E	82 10V

■ Packaging (Refer to page 54 for the Parts List.)

P4 (SPSD152)	: ACCESSORY CASE
A1 (EUR643805)	: REMOTE CONTROL
P5 (XZB24X33C04)	: VINYL BAG
A2 (RFKSACH34PCK ... PC)	: INSTRUCTION MANUAL ASS'Y
A2 (RQT3302-P ... P)	: INSTRUCTION MANUAL
A3 (RSA0006)	: FM ANTENNA
A4 (RSA0010)	: AM LOOP ANT
A5 (SJA172)	: AC CORD



MESA Printed in Singapore
G960303800 X/J/R/C